Canon

NETWORK CAMERA SERVER

VB101

User's Manual

⚠Safe Use of Equipment

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Appendix

Please read this user's manual carefully before opration.
Be sure to read the "⚠Safe Use of Equipment" section before using this equipment.
Store this manual in a readily accessible location for future reference.

E
ENGLISH

Introduction

Thank you for purchasing the Canon Network Camera Server VB101 (referred to hereafter as the system).
This manual describes how to set up and use the server. Read this manual carefully before using the server to ensure effective operation. In particular make sure that you read the "⚠Safe Use of Equipment" in this manual, as well as the CD-ROM Readme file.

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2. The contents of this Manual are subject to change without notice.
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4. Item 3. notwithstanding, Canon accepts no responsibility for any effects resulting from the use of this Manual.

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⚠ Safe Use of Equipment

⚠ An exclamation point, within a triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

1 ⚠ Important Warnings

⚠ CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The serial number of this equipment may be found on the back of the camera head. No others have the same serial number as yours.
You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.
Date of Purchase
Dealer Purchased from
Dealer Address
Dealer Phone No.
Model No. VB101
Serial No.

2 ⚠ Important Operational Instructions

⚠ WARNING:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

⚠ CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

FDA regulation

This communication camera has not been evaluated by the Food and Drug Administration (FDA) for use as a medical device. When incorporated into a system with medical applications, FDA regulations may apply. Therefore, please consult your legal advisor to determine whether FDA regulations apply.

FCC NOTICE
Network Camera Server VB101 (D78-0138)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with class B limits in Subpart B of Part 15 of FCC Rules.
Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.
Canon U.S.A. Inc.
One Canon Plaza, Lake Success, NY 11042, U.S.A.
Tel No. (516) 328-5600

IC NOTICE
This product does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Interference-causing equipment standard entitled 'Digital Apparatus', ICES-003 of the Industry Canada.

NOTIFICATION IC
Cet appareil numériquw respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norma sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictées par l'Industrie Canada.

Dieses Produkt ist zum Gebrauch im Wohnbereich, Geschäfts- und Gewerbebereich sowie in Kleinbetrieben vorgesehen.

3 ⚠ IMPORTANT SAFETY INSTRUCTIONS

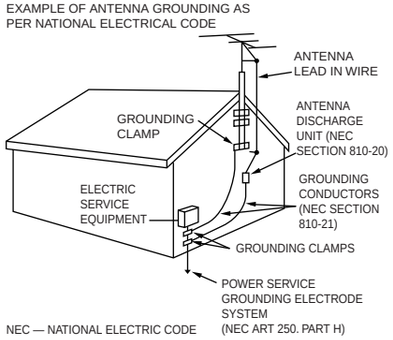
In these safety instructions, the word "equipment" refers to the Canon Network Camera Server VB101 and all its accessories.

1. Read Instructions - All the safety and operating instructions should be read before the equipment is operated.
2. Retain Instructions - The safety and operating instruction should be retained for future reference.
3. Heed Warnings - All warnings on the equipment and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and maintenance instructions should be followed.
5. Cleaning - Unplug this equipment from the wall outlet before cleaning.

   Wipe the equipment with a clean soft cloth. If necessary, put a cloth in diluted neutral detergent and wring it well before wiping the equipment with it. Finally, clean the equipment with a clean dry cloth. Do not use benzene, thinner or other volatile liquids or pesticides as they may damage the product's finish. When using chemically-treated cleaning cloths, observe those precautions accordingly.
6. Accessories - Do not use accessories not recommended in this manual as they may be hazardous. Always use specified connection cables. Connect devices correctly.
7. Water and Moisture - Hazard of electric shock - Do not use the equipment near water or in rainy/moist situations. Do not put a heater near this equipment.
8. Placing or Moving - Do not place on an unstable cart, stand, tripod, bracket or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. An equipment and cart combination should be moved with care.

   Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.
9. Power Sources - The PA-V16 AC adapter should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your equipment dealer or local power company.
10. Polarization - The PA-V16 AC adapter is equipped with a polarized 2-prong plug (a plug having one blade wider than the other).
    The 2-prong polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
11. Power Cord Protection - Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to plugs and the point from which the cords exit the equipment.
12. Outdoor Antenna Grounding - If an outside antenna is connected to the equipment, be sure the antenna is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No.70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure 1.

fig-1

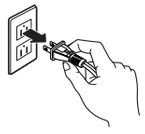

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE
ANTENNA LEAD IN WIRE
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CLAMP
GROUNDING CONDUCTORS (NEC SECTION 810-21)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)
NEC — NATIONAL ELECTRIC CODE

13. Lightning - For added protection of this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, disconnect it from the wall outlet and disconnect the antenna. This will prevent damage to the equipment due to lightning and power-line surges.
14. Power Lines - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
15. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
16. Object and Liquid Entry - Never push objects of any kind into this equipment through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Be careful not to spill liquid of any kind onto the equipment.
17. Servicing - Do not attempt to service this equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
18. Damage Requiring Service - Disconnect this equipment from the wall outlet and all power sources including batteries, and refer servicing to qualified service personnel under the following conditions.
    a. When the power-supply cord or plug is damaged.
    b. If any liquid has been spilled onto, or objects have fallen into, the equipment.
    c. If the equipment has been exposed to rain or water.
    d. If the equipment does not operate normally even if you follow the operating instructions. Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
    e. If the equipment has been dropped or the cabinet has been damaged.
    f. When the equipment exhibits a distinct change in performance. This indicates a need for service.
19. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts that are specified by Canon or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
20. Safety Check - Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in safe operating order.
21. Do not install the equipment in the following locations as this can cause a fire or electric shock:
    - Hot locations
    - Close to a fire
    - Very humid or dusty locations
    - Locations exposed to direct sunlight
    - Locations exposed to salt spray
    - Close to flammable solvents (alcohol, thinners, etc.)
22. When any of the following occurs, immediately switch OFF the equipment, unplug it from the main power supply and contact your nearest Canon supplier. Do not continue to use the equipment as this can cause a fire or electric shock.
    - The equipment emits any smoke, heat, abnormal noise, or unusual odor.
    - A metal object falls into the equipment.
    - The equipment is damaged in some way.
23. Please observe the following when using the equipment. Failure to do so can result in a fire or electric shock.
    - Do not use flammable sprays near the equipment.
    - Do not subject the equipment to strong impacts.
24. Please observe the following when handling the batteries. Failure to do so can result in the batteries bursting or emitting heat, sparks or corrosive fluid.
    - Do not throw the batteries into a fire, and do not heat, short-circuit or attempt to disassemble the batteries.
    - Do not attempt to recharge the batteries.
    - Do not use batteries other than those specified for use with the equipment.
25. Please observe the following when handling the batteries. Failure to do so may result in the batteries bursting or emitting heat, sparks or corrosive fluid.
    - When the batteries are used up, or when the equipment will not be used for an extended period, remove the batteries.
    - When replacing the batteries, always replace both batteries, and do not use different types of batteries together.
    - Ensure that the + and - terminals are correctly positioned when you load the batteries.
    - If any soiling or leakage of the internal battery fluid occurs, thoroughly clean the soiling or leaked fluid with water.

4 Maintenance

Cleaning the Equipment

1. Unplug the AC adapter from the wall outlet.
2. Carefully wipe the equipment with a soft cloth that has been moistened with water or a mild detergent.



> ⚠WARNING
>
> **Do not use flammable solvents such as alcohol, benzene or thinners.**
> The use of such substances can cause a fire or electric shock.

3. Wipe with a dry cloth.
4. When you have finished, plug the AC adapter back in to the wall outlet.

Icons Used in This Instruction Manual

Note — Indicates important information that must be observed or actions that are prohibited during an operation. These notes must be read to prevent possible faults or damage to the equipment.

Tip — Indicates supplementary information or a reference to an operation. Users are advised to read these memos.

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Chapter 1

Before Using the VB101

This chapter contains information that you should read before using the VB101. It also describes the features of this system, the system configuration, the hardware and software requirements, and the name and fonctions of the system components.

Features of the VB101

The VB101 digitalizes images captured from a video camera, allowing easy distribution of these images over the Internet or an intranet. The person receiving the images can use the Canon WebView Livescope software (Java version viewer and Helper version viewer) to view the images. If a Canon Communication camera is used, a wide range of additional functions are also available, including remote camera control and using a Web page for everything from transmitting video information to video image monitoring.
Furthermore, by using this system together with the optional* WebView Livescope MV monitoring viewer, you can conduct remote monitoring from multiple locations. For more information on how to use the WebView viewer software and the WebView Livescope MV software, refer to the respective software manuals.

*VB-101 can also be used in VIEW-Windows.

*VIEW-Windows is a product designed for use within Japan.

■High-quality images with a high frame rate

The VB101 is capable of image capture at speed of up to 30 fps. Image compression is performed using Motion-JPEG. Because the sender can control the image quality and capture rate, the settings can be optimized for the network environment. The image quality can be set on a scale from 1 to 99, and the capture rate can be set to speeds between 0.1 and 30 fps.

■Up to 4 cameras connected

Up to 4 video cameras can be connected to the VB101 and up to two cameras can be selected for camera control. Cameras can be switched by the viewer and the images from the selected camera are displayed. Two RCA sockets are provided as the input interface for video cameras and 2 BNC sockets are provided for cameras commonly used for monitoring. The user can specify which camera connected to which socket is to be controlled.

■Versatile camera control

If a Canon Communication camera is used, the client can control the angle (pan and tilt) and the zoom ratio of cameras installed in remote locations just as if he or she was actually there. The client can also impose operating limits by specifying camera angles that are not to be shown and restricting the available zoom settings.

■Preset function for camera positions

By registering camera angles specified beforehand, the user can display a scene requested by a client simply by selecting the specified preset information.

■New VC-C4/VC-C4R Cameras supported

The VB101 can be used with the latest Canon Communication Camera VC-C4/ VC-C4R (support for reverse suspended installation). This allows the user to control VC-C4/VC-C4R cameras, which provide improved performance and functionality, including reverse suspended installation and a larger control range than the VC-C3 and VC-C1 MK II.

■Internet/intranet compatibility

The VB101 software is compatible with TCP/IP and HTTP, the standard Internet protocols, allowing video image transmission and remote camera control to be performed easily from a Web browser. The Ethernet interface supports 10 Mbps/100 Mbps autosensing (or auto detection), and a PC card modem can be used to access public switched telephone networks.

■Simple set up and management

By accessing a Setup Management page provided on the Web, you can use the Web browser on your PC to set up and manage the system from a remote location without ever visiting the place where the system is actually installed. You can also use the special setup program provided to specify the initial IP address. IP addresses can be automatically specified in network environments where Bootp can be used.

■Log functions

You can use the logging functions to save log information on events such as faults and access statuses to a file and then send that information to a specific e-mail address.

■Built-in Web server and FTP server

As well as transmitting video images, the VB101 also features built-in Web server functions for Web pages. By making Web page data to an optional flash memory card, the VB101 can be also used to transmit data and video images across the Web. Moreover, because the VB101 has a built-in FTP server, it is also possible to download Web pages remotely.

■Fully expandable

The VB101 is provided with 2 card slots which you can use to add a modem, or a flash memory as required.

■Concurrent video is distributed up to 20 clients

Up to 20 clients can view video at the same time from a single VB101. Also, the number of concurrent accesses can be specified on the camera server to suit the available network bandwidth.

■Camera control rights to coordinate camera control contention

The introduction of control rights means that contention can be prevented when multiple video receivers are controlling the camera at the same time. The default time for which clients receiving images have exclusive control of the camera is 20 seconds in the initial factory settings. (This setting can be changed from the server.)

■More powerful security functions

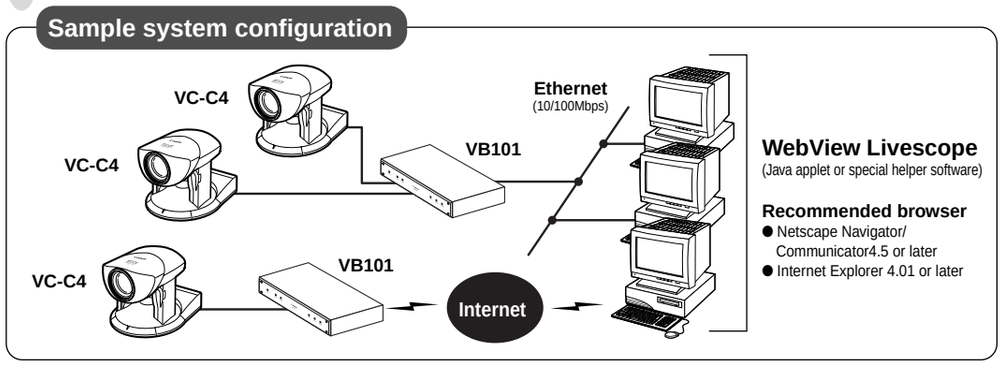
The destinations for video transmissions can be restricted based on IP addresses and passwords.

■Picture recording function using schedule management and cooperation with external devices

The VB101 is provided with picture recording and digital output functions controlled by preset schedules, along with on/off functions that are triggered by digital input from connected devices. These features expand the range of system applications still further.

System Configuration

Example of Webview Livescope System Configuration



Webview Livescope is a system, which webcasts live video images shot using a Canon Communication Camera (VC-C4, etc) installed in a remote location to computers connected to the Internet or an intranet.

Clients can view the received video images simply using a Web browser. And because clients can control the cameras remotely from their Web browser via the network, Webview Livescope provides realtime images with a true feeling of immediacy.

Images from the VB101 are viewed on a special viewer. Embedding this viewer in a web page greatly expands the possibilities of the Internet or intranets, including such functions as monitoring of remote locations using a Web browser and the creation of striking Web pages, thereby building networks that a more useful to business.

Video image receiver

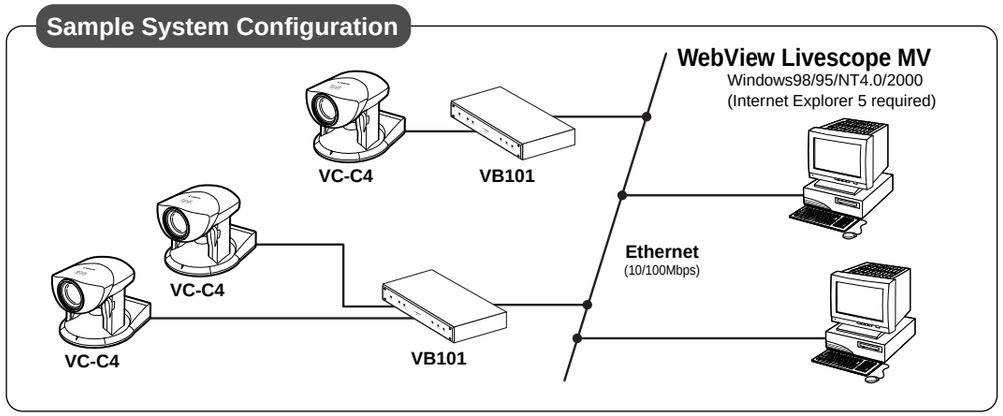
Viewer (free of charge)

This refers to the computer that runs a Viewer module used to view images transmitted from the VB101 on a Web browser. The two types of viewer module are described in the table below.

■Viewer software types and functions

Viewer Software	Functions
Java Viewer	• A Web browser that can run Java applets and displays video images from the VB101. • Because the Java Viewer is automatically downloaded and does not need to be pre-installed, unlike their helper viewer, it is compatible with any platform that supports Java-capable environments. • Because it uses the HTTP protocol, the Java Viewer penetrates firewalls unscathed. However, it may not run stably on some platforms or browser types. Also, because the viewer is downloaded when the Web page loads, start-up times and execution speeds are slower than the helper viewer.
Helper Viewer	• A helper application for viewing video images from the VB101 that is launched from a Web browser. • The helper viewer must be pre-installed. • This application can be downloaded free of charge from the CD-ROM provided, or the following Web page. URL: http://www.x-zone.canon.co.jp/WebView-E/download/dload.htm • Compared with the Java Viewer, start-up is faster because the viewer does not need to be downloaded. This viewer is recommended for users who use the viewer frequently. • Because it supports the HTTP protocol, the helper Viewer penetrates firewalls unscathed.

Example of Webview Livescope MV System Configuration



WebView Livescope MV provides administration tools and a multi-viewer for an easy-to-use centralized monitoring environment that uses multiple VB101 network cameras.

Users can easily create their own monitoring screens from more than 60 screen patterns-almost without needing to refer to the manual, which in turn reduces the time it takes to create a Web page- just by answering Create Screen Wizard questions. A maximum of 16 locations can be displayed simultaneously on a monitoring screen and users can also use the Map function, Auto switch function and Auto drive function.

In addition, you can compile a list of multiple VB101 cameras to control camera settings, perform version control and control operation status.

■Optional Products

- Webview Livescope MV version 1.0

■Optional Accessories

- Modem card
- Flash memory card
- PC
- Canon Communication Camera VC-C4/VC-C4R/VC-C3
- Wide Converter WL-37 (for VC-C4), WD-37 (for VC-C3)
- Sensor
- Relay

Note

● To connect the VB101 to the Internet, you require a leased line connection to an Internet service provider or a LAN-type dialup IP connection. If you are using a LAN-type dialup connection, check that the connection supports bidirectional calling.

● You need a Web browser to use the VB101. Check beforehand that you can use a Web browser.

Hardware and Software Requirements

Webview Livescope Viewer Software

Java Viewer version 3.10

PC	IBM PC/AT compatible
Operating System	Windows 95/98 or Windows NT 4.0 (IE 4.0 or later required)/Windows 2000
Web Browser	Netscape Navigator/Communicator 4.5 or later, or Microsoft Internet Explorer 4.01 or later required

* This viewer is installed on the VB101 and is automatically downloaded by the client at access.
* This software may not run stably on operating systems other than those listed above.

Helper Viewer version 3.10

PC	IBM PC/AT compatible
Operating System	Windows 95/98 or Windows NT 4.0 (IE 4.0 or later required)/Windows 2000
Web Browser	Netscape Navigator/Communicator 4.5 or later, or Microsoft Internet Explorer 4.01 or later required

* This software must be installed beforehand.
* It can be installed free of charge from the CD-ROM for the VB101, or the following Web site.
  URL: http://www.x-zone.canon.co.jp/WebView-E/download/dload.htm

Note

The helper viewer or plug-in viewer for Webview Livescope version 1.21, 2.01 and 3.0 can also be used, but some of the functions differ.
On Macintosh computers, some of the functions of the helper viewer for Webview Livescope version 1.20 are not available.

Webview Livescope MV Monitoring Station Software version 1.0 (optional)

Computer	IBM PC/AT compatible device CPU: Pentium II 266 MHz or better, RAM: 64 Mbytes or better, Hard disk capacity: 300 Mbytes or better
OS	Windows 95/98 or Windows NT 4.0/Windows 2000
Web Browser	Microsoft Internet Explorer 5 or later required

Compatible Cameras (optional)

Canon Communication Camera
VC-C4/VC-C4R
(NTSC)

Canon Communication Camera
VC-C4R
(NTSC)

Canon Communication Camera
VC-C3
(NTSC/PAL)

The wide converter WL-37 (for the VC-C4) and the wide converter WD-37 (for the VC-C3) are available as optional accessories.

Tip

While other cameras can be used, the camera control functions will not be available. Only the video functions can be used.

Compatible Networks

- 10 Base-T/100 Base-TX Ethernet (auto negotiation)
- Public switched telephone networks (Use a recommended modem card)

Compatible PCMCIA Cards

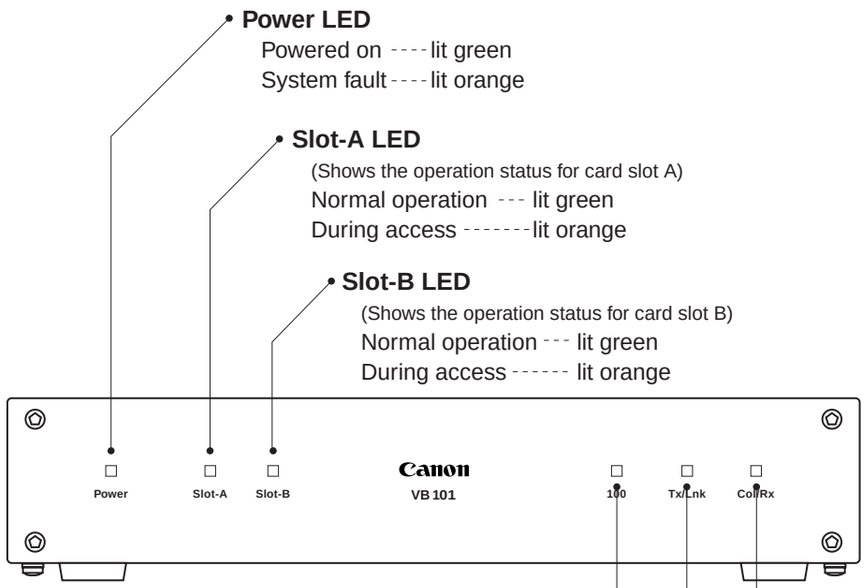
Use a recommended PCMCIA card. For further information, contact your Canon dealer.

Compatible Cables (optional)

RS-232C cables for camera control and video cables are available as optional accessories in lengths other than the ones provided. For further information, contact your Canon dealer.

System Components and Their Operation

Front View



Power LED
Powered on ---- lit green
System fault ---- lit orange

Slot-A LED
(Shows the operation status for card slot A)
Normal operation --- lit green
During access ------- lit orange

Slot-B LED
(Shows the operation status for card slot B)
Normal operation --- lit green
During access ------ lit orange

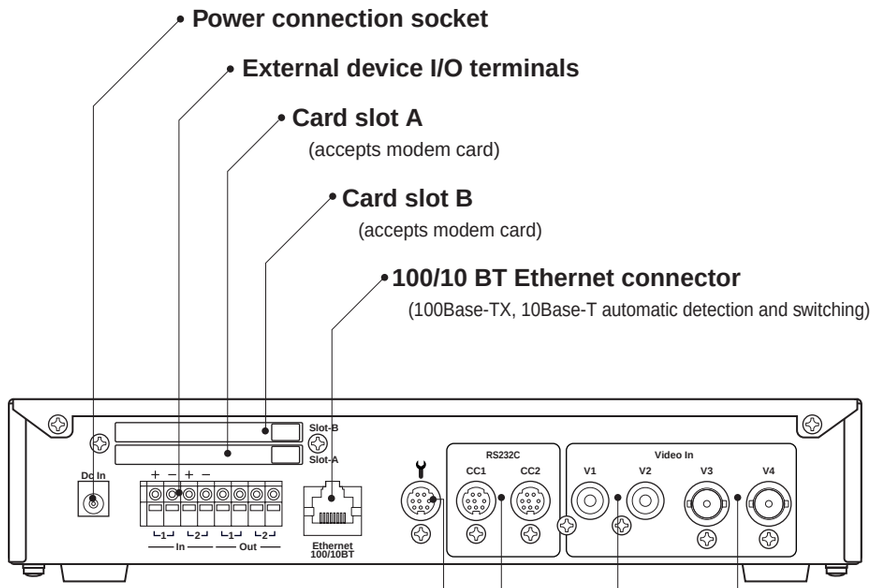
100 LED
(Shows the Ethernet 100/10 operation mode)
100Base-TX --- lit green
10Base-T ------ off

Tx/Lnk LED
(Shows the Ethernet transmission status)
Normal connection ----- lit green
During transmission ---- lit orange

Col/Rx LED
(Shows the Ethernet reciving status)
Receiving --- lit green
Collision ----- lit orange

Tip **When you power on the VB101, the power LED glows orange for several seconds and then turns green. This is normal and does not indicate a fault.**

Rear View



Power connection socket

External device I/O terminals

Card slot A
(accepts modem card)

Card slot B
(accepts modem card)

100/10 BT Ethernet connector
(100Base-TX, 10Base-T automatic detection and switching)

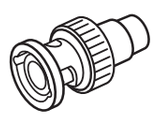
Console connector terminal for initial setup and servicing
(RS-232C)

Camera control connector CC1, CC2
(RS-232C, with one touch lock)

Video input sockets V1, V2
(RCA pin-jack)

Video input sockets V3, V4
(BNC connector)

Tip



The video cable supplied with the Canon Communication Camera VC-C4/VC-C4R, VC-C3 and VC-C1 MK II is compatible with the RCA pin-jack. To connect these cameras to a BNC socket, use a third party Pin → BNC conversion adapter.

Chapter 2

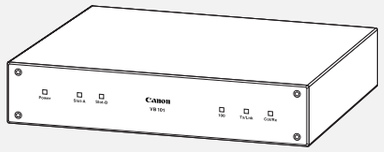
Installation

This chapter explains how to connect the system components and describes a sample network configuration.

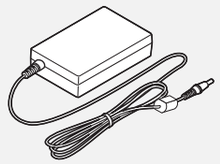
Package Contents

The VB101 package contains the following items. If any of these items is missing, contact the retailer from which you purchased the product.

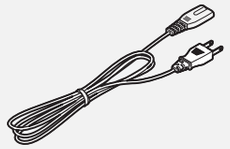
1. VB101 main unit



2. AC Adapter PA-V16



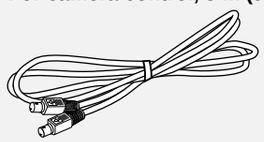
3. AC cable (1 meter 3 ft. 3/32 in.)



* The cable length may differ depending on the country in which the product was purchased.

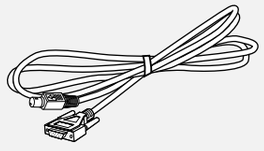
4. RS-232C cable (miniDIN-miniDIN)

● **For camera control, 3 m (9 ft. 10 3/32 in.)**



5. RS-232C cable (miniDIN-Dsub9pin Female sub)

● **For setup, 3 m (9 ft. 10 3/32 in.)**



6. CD-ROM

CD-ROM contents

ReadMe
VB101 Initial Setup Tools
Factory Default Setup Tools
Administrator Viewer
Remote Firmware Upgrade Utility
Internal File System
Webview Livescope Helper Viewer version 3.1
Webview Livescope Viewer User's Manual (PDF file)

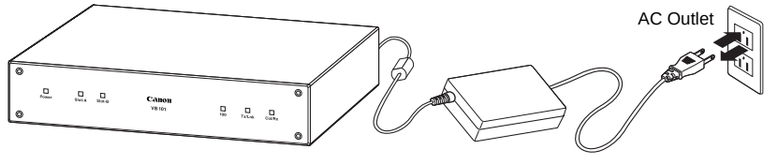
7. Users Manual (This document)

8. Warranty Card

Precautions for use

Precautions for Switching the VB101 On and Off

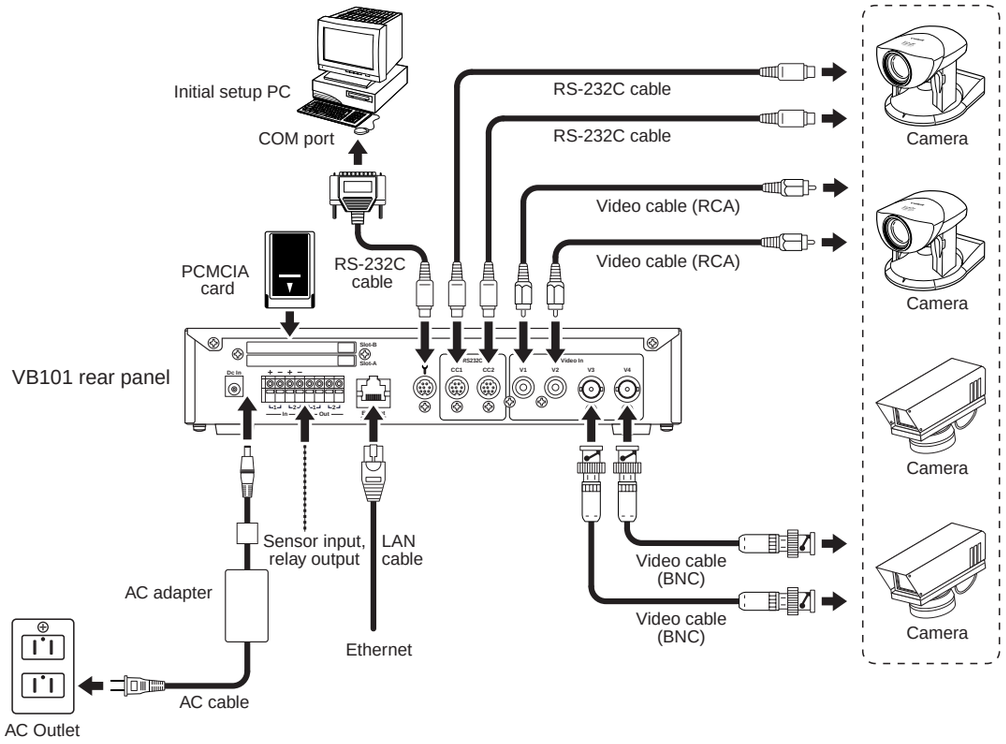
The VB101 has no power switch. To switch the VB101 off and on, unplug the AC adapter. When you unplug the AC adapter from the VB101, wait at least 5 seconds and then plug the AC adapter to the VB101. Be sure to observe the precautions given in "⚠Important Safety Instructions".



Note

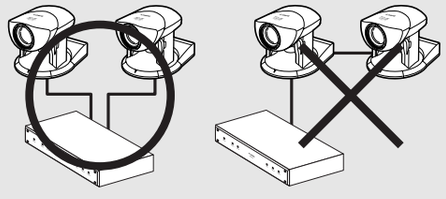
- **Refer also to the enclosed ReadMe file. The ReadMe file may contain important information not included in this manual. Be sure to read this file.**
- **If the VB101 will not be used for some time, unplug the AC adapter from the power supply.**

Connecting the Components



Notes

- **The cable connecting the VB101 and the camera should be no longer than 15 meters (49 ft. 2 19/32 in.), as stipulated in the RS-232C standards. If the cable length exceeds 15 meters (49 ft. 2 19/32 in.), system operation is no longer guaranteed.**
- **The video cable supplied with the Canon Communication Camera VC-C4/VC-C4R, VC-C3 and VC-C1 MK II is compatible with the RCA pin-jack. To connect these cameras to a BNC socket, use a third party Pin → BNC conversion adapter. (→ P.19)**
- **To connect a RS-232C cable to the VC-C4/VC-C4R, use the IN socket.**
- **Though daisy-chain connections are possible under the VC-C4/VC-C4R specifications, only one camera can be connected to each socket since a VB101 does not support daisy-chain connections.**

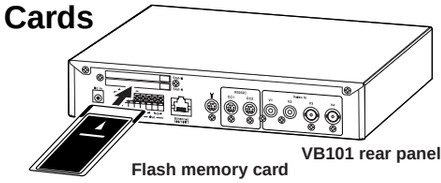


Using a PCMCIA Card

The VB101 has 2 card slots, and you can record Web page data, etc. by inserting a flash memory card into one of these slots.

Procedure for Using Flash Memory Cards

1 Insert the flash memory card into the VB101.



You can insert the card into either slot. But if cards are inserted in both slots, you cannot use both cards at the same time. Preparation is complete when the LED on the front of the VB101 changes from green to orange.

2 Create the directories.

Create directories called "htdocs" and "logs", for web page data (hereafter referred to as content) and log data respectively, on the flash memory card. You can create the directories using ftp commands or by inserting the flash memory card into a notebook PC and using file operations.

3 Save the content.

You can save the content to the flash memory card using either file operations on a notebook PC or remotely using FTP. When a flash memory card is inserted correctly, it is mounted in the VB101 file system as a directory called "/card". The content data is stored as files in the /card/htdocs directory (file names made up of eight alphanumeric characters followed by a three-character extension). Data can also be stored in the flash memory built into the VB101. However, due to the limited available space (550 kilobytes), only the minimum required amount of data can be stored.

Device	**File system** (accessed by file operations or by an ftp client)	**URL** (accessed from a Web browser)
On-board flash memory	ftp://IP address/htdocs	http://IP address/
Flash memory card	ftp://IP address/card/htdocs	http://IP address/opt/

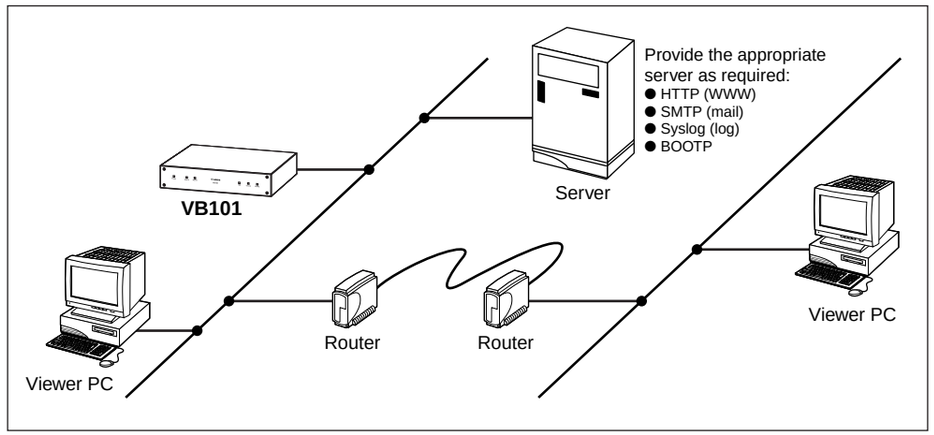
Note

- **To use a Web browser as an FTP client:**
  Insert "user name: password@" before the IP address, as in "ftp://root:VB101@192.168.100.1/card/htdocs". The FTP user is restricted to the system administrator (→ P.36). The VB101 does not support anonymous FTP.
- **Use only flash memory cards recommended by Canon.**

Sample Network Configurations

This section describes some typical installation modes for the VB101.

Sample LAN Environment Configuration

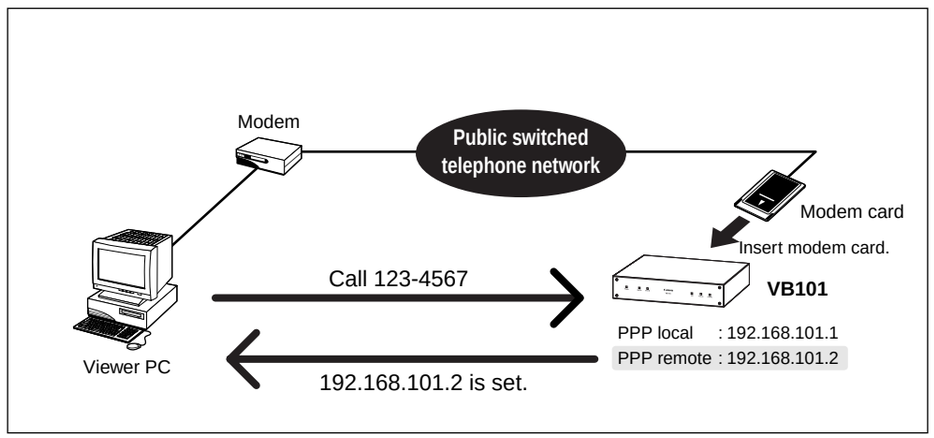


This example shows the VB101 connected to a LAN by Ethernet. In this configuration, video images can be used by viewers in the same Ethernet segment as the VB101 and by viewers with access to that segment.

To send log information such as faults and access statuses by e-mail and save that information to another computer, an SMTP server or a Syslog server is required.

To automatically assign an IP address for the VB101, a BOOTP server is required.

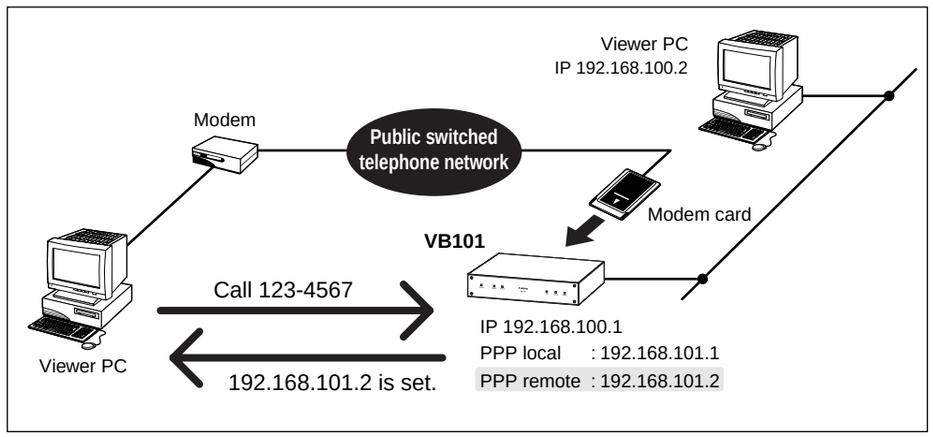
Sample Dialup Environment Configuration



This example shows the VB101 connected in a dialup environment. In this configuration, video images can be accessed by viewers which can dial up to the VB101 using a modem.

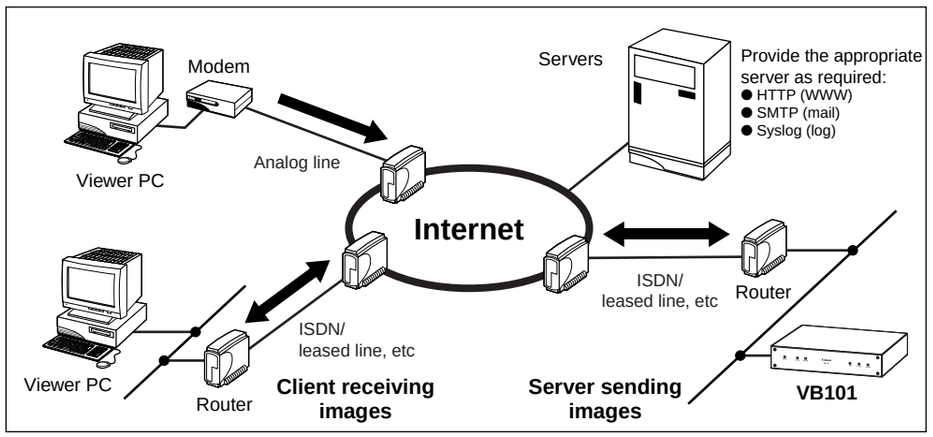
In this situation, a modem card must be inserted into the card slot (use a recommended modem card). PPP (Point to Point Protocol) is used as the network protocol. For information on settings, refer to Chapter 3 (→ P.39).

LAN plus Dialup Environment



This example shows the VB101 connected to a LAN and a dial up environment. Video images can be used by viewers in the same Ethernet segment as the VB101, viewers who can access the segment, or by viewers which can dial up to the VB101 with a modem.

Sample Configuration in an ISP Environment



This example shows an environment in which the VB101 is connected to an ISP (Internet service provider). In this configuration, video images is used by viewers capable of accessing the ISP. Bidirectional communication is possible between the VB101 and the ISP, and a fixed IP address must be set for the VB101.

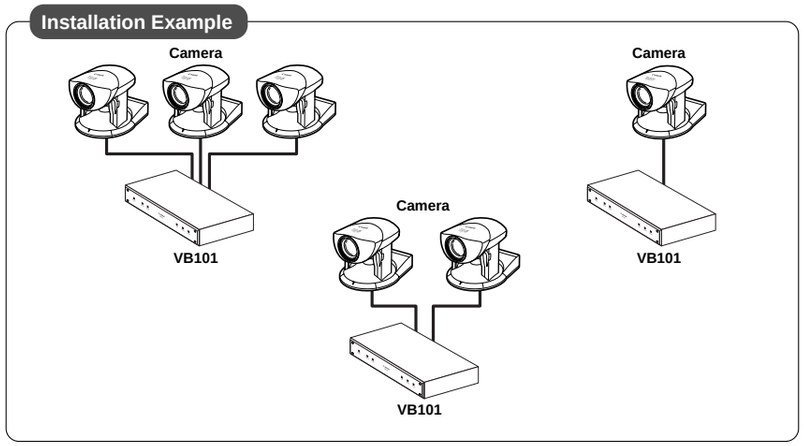
Chapter 3

Setup Procedures

This chapter describes the procedures from the initial setup of the VB101 through to operation checking and the method for specifying detailed settings.

Installation Workflow

Once the initial setup has been completed and operation has been verified, the VB101 can be used immediately. This section describes the installation procedure for 3 VB101s and 6 cameras, as shown in the figure below.

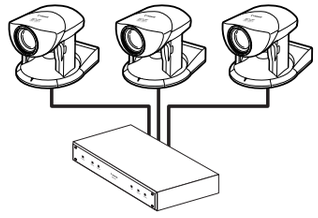


Installation Procedure

1 Perform initial setup for all the VB101s (→ next page).

You should determine the IP address and password for each unit beforehand. You should then set these for each VB101 and create the web page before transporting the VB101 to the installation site (→ Chapter 4).

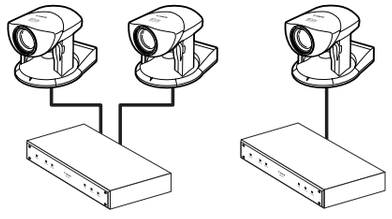
2 Install the VB101 and the cameras. (→ Chapter 2)



Up to 2 cameras can be controlled. Connect RS-232C cables to control connectors CC1 and CC2 on the cameras to be controlled (→ P.24).

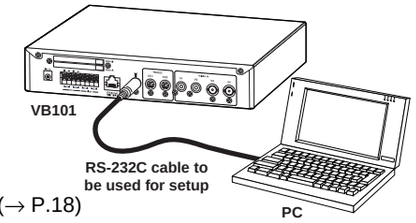
3 Check the operation. (→ P.33)

4 Install the remaining VB101 units in the same way and check that they are operating normally.



Initial Setup

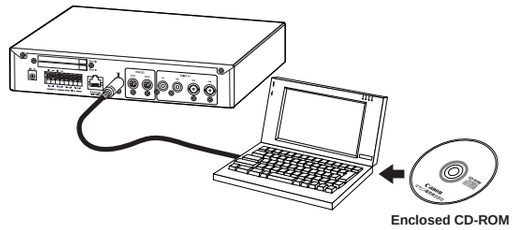
1 Connect the VB101 to the PC to be used for initial setup by using bundled RS-232C cable.



2 Switch the VB101 and the PC on.

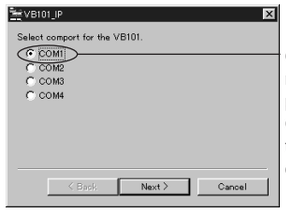
The power lamp on the VB101 turns to green. (→ P.18)

3 Insert the CD-ROM supplied with the VB101 into the PC and launch the "VB101_IP.exe" program.



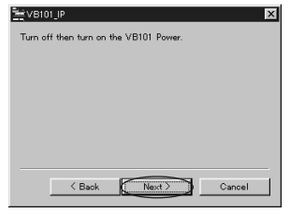
4 When the "VB101_IP.exe" dialog box appears, use steps ① to ④ in the procedure below to enter the password, IP address, subnet mask, and gateway address.

① Select the connection port.

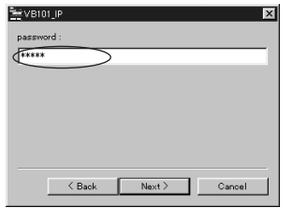


On some PCs you may have to select a port other than COM1. Check the port number to which the serial cable is connected.

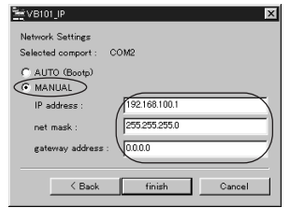
② Switch the VB101 off and then on again.



③ Enter "VB101" as the password (Factory initial setting).



④ Enter the IP address, subnet mask, and gateway address.

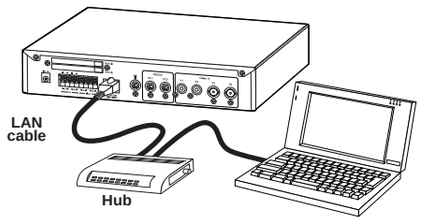


Note

- **If you do not know the network settings, contact the network administrator.**
- **When you click the [Cancel] button after switching the VB101 back on, the power LED remains lit orange. At this point, the VB101 software has not started up. If you do not need to change the settings, switch the VB101 off and then on again, and check that the power LED turns green. To begin the setup procedure again, launch "VB101_IP.exe" and then switch the VB101 off and on again as directed by the on-screen instructions.**

5 Remove the RS-232C path cable connected to the PC used for initial setup and connect the LAN cable.

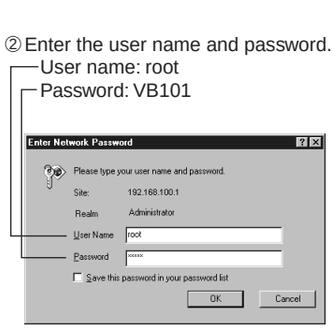
When you connect cable, turns off the VB101 power.



6 Follow steps ① - ③ below to launch the browser and enter your user name and password.

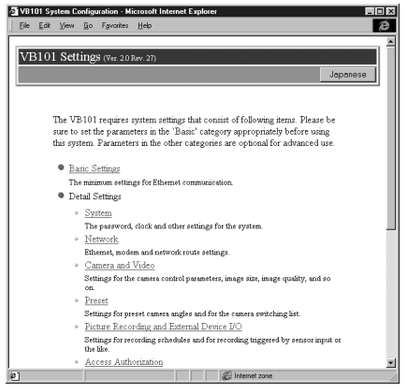
① Launch the browser and enter the following URL:
http://192.168.100.1/admin/

② Enter the user name and password.
User name: root
Password: VB101



③ The title page for specify is displayed.
A sample page is shown at:
http://192.168.100.1/sample/

Settings page


VB101 System Configuration - Microsoft Internet Explorer
VB101 Settings (Ver. 2.0 Rev. 27)
Japanese
The VB101 requires system settings that consist of following items. Please be sure to set the parameters in the 'Basic' category appropriately before using this system. Parameters in the other categories are optional for advanced use.
Basic Settings
The minimum settings for Ethernet communication.
Detail Settings
System
The password, clock and other settings for the system.
Network
Ethernet, modem and network route settings.
Camera and Video
Settings for the camera control parameters, image size, image quality, and so on.
Preset
Settings for preset camera angles and for the camera switching list.
Picture Recording and External Device I/O
Settings for recording schedules and for recording triggered by sensor input or the like.
Access Authorization

Note **For the example, the IP address is given as "192.168.100.1". However, the actual IP address must be changed to match your system settings.**

7 Check the operation (→ P.33) and specify detailed settings (→ P.34).

Note

- **When you change the settings, always you should click the "Send Config. to VB101", or the "Send Config. and Reboot VB101" button.**
- **Before check the operation, install the Web browser on your PC.**
- **To restore the factory initial settings, refer to P.106 in the appendix.**

Checking Operation

When you have completed the initial setup, check that the VB101 works normally. Use the sample page to simplify checking.

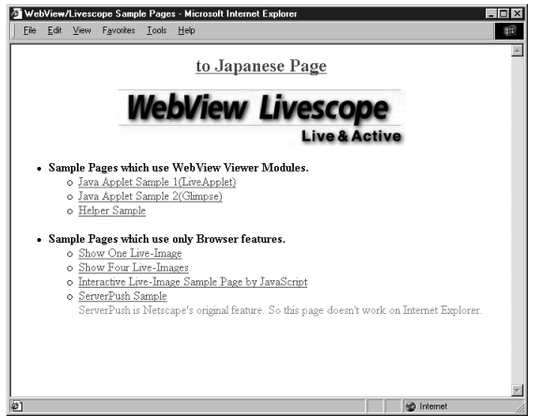
Note **Install the Web browser on your PC beforehand.**

1 When you have completed initial setup, launch the Web browser and enter the following URL:

(Example) http://192.168.100.1/sample/
Enter the value specified in the initial settings (→ P.31) as the IP address (192.168.100.1).

Note **For the example, the IP address is given as "192.168.100.1". However, the actual IP address must be changed to match your system settings.**

Sample page


WebView/Livescope Sample Pages - Microsoft Internet Explorer
to Japanese Page
WebView Livescope
Live & Active
Sample Pages which use WebView Viewer Modules.
Java Applet Sample 1(LiveApplet)
Java Applet Sample 2(Glimpse)
Helper Sample
Sample Pages which use only Browser features.
Show One Live-Image
Show Four Live-Images
Interactive Live-Image Sample Page by JavaScript
ServerPush Sample
ServerPush is Netscape's original feature. So this page doesn't work on Internet Explorer.

2 Click on the sample page.

If the sample page appears and the video image is displayed, the VB101 is operating normally.

Detail Settings

Accessing the Settings Title Pages

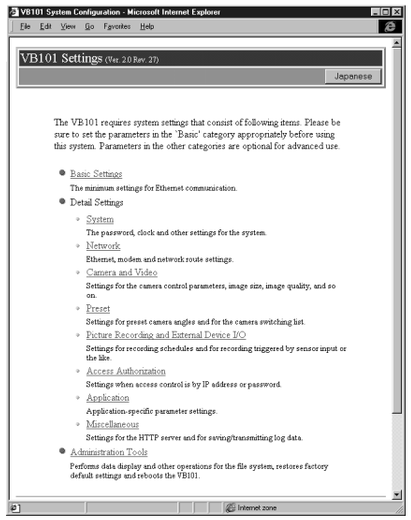
The various settings on the VB101 are specified by using a browser to access Web pages on the server. You begin by accessing the title page for the settings.

1 Use the browser to access http://192.168.100.1/"path".

Use the IP address specified in "Initial Setup" (→ P.31) and in the "path" field, use the path specified in "System" (→ P.37). The default setting for "path" is "admin".

2 Enter the user name and password.

You are now asked for your user name and password. In the factory initial settings, the user name is "root" and the password is "VB101". Enter these settings. These can be changed at any time from the "System" page.


VB101 System Configuration - Microsoft Internet Explorer
VB101 Settings (Ver. 2.0 Rev. 27)
Japanese
The VB101 requires system settings that consist of following items. Please be sure to set the parameters in the 'Basic' category appropriately before using this system. Parameters in the other categories are optional for advanced use.
Basic Settings
The minimum settings for Ethernet communication.
Detail Settings
System
The password, clock and other settings for the system.
Network
Ethernet, modem and network route settings.
Camera and Video
Settings for the camera control parameters, image size, image quality, and so on.
Preset
Settings for preset camera angles and for the camera switching list.
Picture Recording and External Device I/O
Settings for recording schedules and for recording triggered by sensor input or the like.
Access Authorization
Settings when access control is by IP address or password.
Application
Application-specific parameter settings.
Miscellaneous
Settings for the HTTP server and for saving/transmitting log data.
Administration Tools
Performs data display and other operations for the file system, restores factory default settings and reboots the VB101.
Internet zone

Note

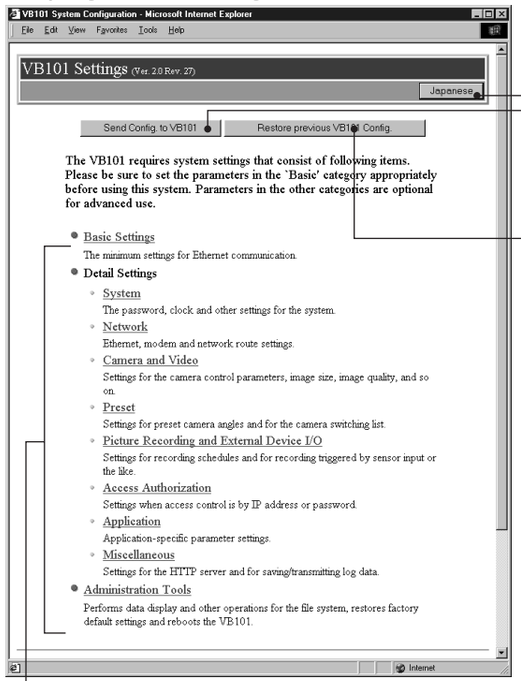
Indication of the title page

The configuration of the settings pages that can be accessed from the title page varies greatly depending on whether Webview Livescope or VIEW-Windows is selected as the target application in "Basic Settings".
VIEW-Windows is an optional product designed specifically for use within Japan. Do not select VIEW-Windows 1.21. (→ P.36)

Settings Title Page

The various settings on the VB101 are specified by using a browser to access Web pages on the server. From this title page, you can move to each settings pages and confirm the changes to the settings, write the changes to the VB101 memory and perform restarts.

Top Page for VB101 Settings


VB101 System Configuration - Microsoft Internet Explorer
VB101 Settings (Ver. 2.0 Rev. 27)
Japanese
Send Config. to VB101
Restore previous VB101 Config.
The VB101 requires system settings that consist of following items. Please be sure to set the parameters in the 'Basic' category appropriately before using this system. Parameters in the other categories are optional for advanced use.
Basic Settings
The minimum settings for Ethernet communication.
Detail Settings
System
The password, clock and other settings for the system.
Network
Ethernet, modem and network route settings.
Camera and Video
Settings for the camera control parameters, image size, image quality, and so on.
Preset
Settings for preset camera angles and for the camera switching list.
Picture Recording and External Device I/O
Settings for recording schedules and for recording triggered by sensor input or the like.
Access Authorization
Settings when access control is by IP address or password.
Application
Application-specific parameter settings.
Miscellaneous
Settings for the HTTP server and for saving/transmitting log data.
Administration Tools
Performs data display and other operations for the file system, restores factory default settings and reboots the VB101.
Internet

Clicking on the titles displays each setting pages.

"Japanese" button
Click this button to display the settings page in Japanese. The button then changes to "English" and switches the display back to English when clicked.

"Send Config. and Reboot VB101." button
After you have changed the settings on a page, click the "OK" button on that page. This returns you to the title page. At that point, the changes have not been sent to the VB101. Clicking this button confirms the changes, writes them into the VB101 memory and automatically restarts the VB101 to validate the changes. If the changes sent do not require restarting, the "Send Config. to VB101" button is displayed instead of this button.

"Restore previous VB101 Config" button
Click this button when you want to cancel the changes you have made to the settings page. All the changes are discarded and returns to its previous values.

- If no settings have been changed, these 2 buttons are not displayed.

Note

- **Do not open multiple browser windows at the same time to change settings in parallel.**
- **Do not use the "Back" and "Forward" buttons in your browser to move between settings pages. Due to the effects of caching, this can result in inconsistencies between the browser settings and the VB101 settings.**

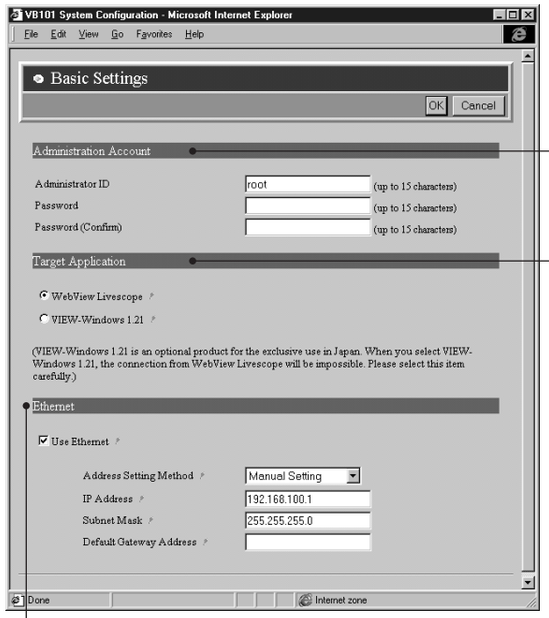
Tip

Those settings that require the VB101 to be restarted for the changes to take effect are marked with a red tick.

Click the [OK] button when you have changed the settings. To discard the changes, click the [Cancel] button. You are then returned to the settings title page.

Basic Settings Page

This page contains indispensable settings taken from the various settings pages for the VB101. If values are specified for these settings on other pages, the most recent change is valid.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
Basic Settings
OK Cancel
Administration Account
Administrator ID root (up to 15 characters)
Password (up to 15 characters)
Password (Confirm) (up to 15 characters)
Target Application
WebView Livescope
VIEW-Windows 1.21
(VIEW-Windows 1.21 is an optional product for the exclusive use in Japan. When you select VIEW-Windows 1.21, the connection from WebView Livescope will be impossible. Please select this item carefully.)
Ethernet
Use Ethernet
Address Setting Method Manual Setting
IP Address 192.168.100.1
Subnet Mask 255.255.255.0
Default Gateway Address
Done
Internet zone

"Administration Account"
The same settings can be specified on the System Settings page.

"Administrator ID"
Specifies the administrator ID. Up to 15 alphanumeric characters can be used including underscores and hyphens. The default setting is "root".

"Password"
Sets the password. Up to 15 ASCII characters can be used (space or printable characters).

"Password (Confirm)"
Confirms the password in the field above.

Target Application
Chooses " Webview Livescope" or "VIEW-Windows" as the application used by the VB101.

VIEW-Windows is an optional product designed specifically for use within Japan. Do not select VIEW-Windows 1.21. WebView Livescope MV can work on "WebView Livescope" setting.

Ethernet
Specifies the same settings as the network settings page.

"Use Ethernet"
Tick this checkbox to use Ethernet.

"Address Settting Method"
If you select "Auto Setting (Bootp)", the IP address is automatically acquired by the Bootp server after restart. If you select "Manual Setting", enter the IP address and subnet mask also.

"IP Address"
Enter a network interface-specific IP address.

"Subnet Mask"
Enter the subnet mask specified for the network to be connected.

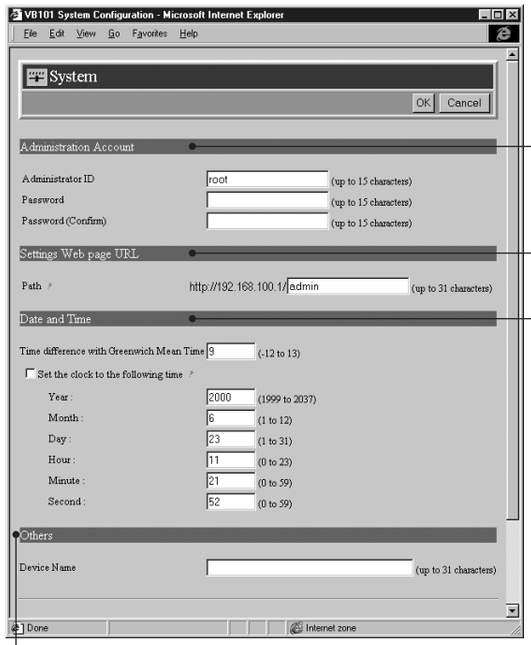
"Default Gateway Address"
Specify this setting when you are connecting to a wide area network such as the Internet.

- If you selected "Auto Setting (Bootp)" as the address setting method, check that the Bootp server has been started up.
- Contact the network administrator for the IP address, subnet mask, and default gateway address settings.

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the title page.

System Settings Page

Use this page to set the administrator ID and password as well as the date and time.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
System
OK Cancel
Administration Account
Administrator ID root (up to 15 characters)
Password (up to 15 characters)
Password (Confirm) (up to 15 characters)
Settings Web page URL
Path http://192.168.100.1/admin (up to 31 characters)
Date and Time
Time difference with Greenwich Mean Time 9 (-12 to 13)
Set the clock to the following time
Year : 2000 (1999 to 2037)
Month : 6 (1 to 12)
Day : 23 (1 to 31)
Hour : 11 (0 to 23)
Minute : 21 (0 to 59)
Second : 52 (0 to 59)
Others
Device Name (up to 31 characters)
Done
Internet zone

"Administration Account"
Specifies the same setting as the basics settings page.

"Administrator ID"
Sets the ID used by the administrator. Up to 15 characters can be set consisting of alphanumeric characters, underscores and hyphens. The default setting is "root".

"Password"
Sets the password. Up to 15 ASCII characters can be used (spaces or printable characters).

"Password (Confirm)"
Confirms the password in the field above.

Settings Web Page URL
Sets the "path" component for the settings management pages. This URL is used subsequently when you access the settings management pages after restarting the system. Up to 31 ASCII characters can be used (Up to 31 characters can be set consisting of alphanumeric characters, underscores and hyphens.).

Date and Time
You can only change the time on the VB101 when the "Set the clock to the following time" option is ticked. Because this setting is returned to the VB101 when the "Send Config. and Reboot VB101" button is clicked, the values for the settings from year to second must be matched to the time when the button is clicked.

Others

"Device Name"
Sets the device name (nickname). The device name is used for log mail. If no name is specified, "VB101" is used.

Note

- **For reasons of system security, we recommend that you change the administrator ID and password at regular intervals. It is also a good idea to change the URL of the Settings page. However, be sure to make a note of the new settings (→ P.110) so that you do not forget them.**
- **If you forget the administrator ID and password, you will have to return the VB101 to a service center. Please contact your Canon dealer.**

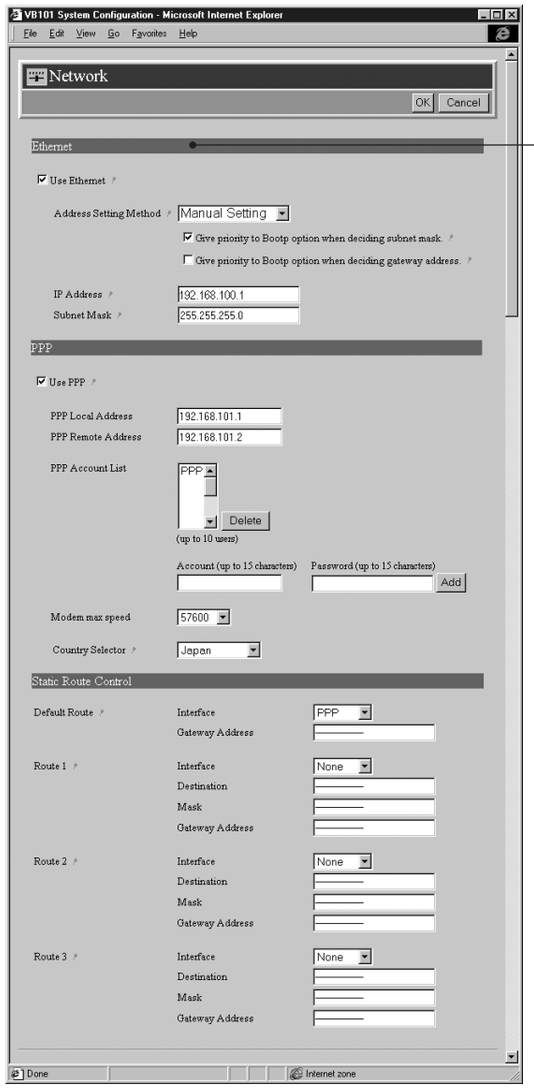
Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Detail Settings

Network Settings Page

Use this page to specify the settings for connecting to an Ethernet or PPP network.

For a LAN connection, specify Ethernet settings. For connections made with a modem, specify PPP settings



Ethernet
Specifies the same settings as the Basic Settings page.

"Use Ethernet"
Tick this checkbox to use Ethernet.

"Address Setting Method"
If you select "Auto Setting (Bootp)", the IP address is automatically acquired by the Bootp server after restart. If you select "Manual Setting", enter the IP address and subnet mask also.

"Give priority to Bootp option when deciding subnet mask."
If you tick this option, the subnet mask specified by the Bootp server is given priority over the subnet mask address specified below when "Auto Setting (Bootp)" is selected as the address setting method.

"Give priority to Bootp option when deciding gateway address."
If you tick this option, the gateway address specified by the Bootp server is given priority over the default gateway address specified below when "Auto Setting (Bootp)" is selected as the address setting method.

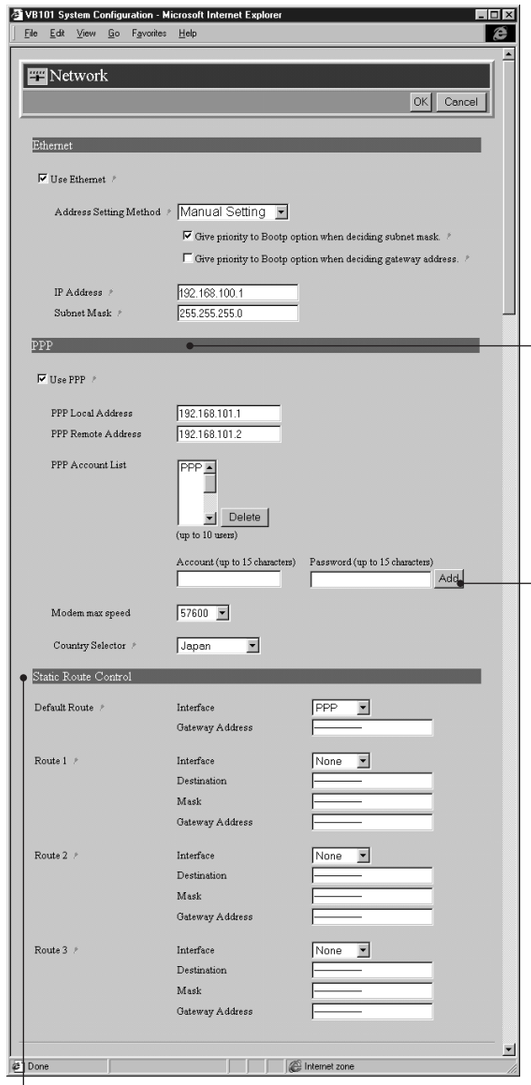
"IP Address"
Enter a network interface-specific IP address.

"Subnet Mask"
Enter the subnet mask specified for the network to be connected.

- If you selected "Auto Setting (Bootp)" as the address setting method, check that the Bootp server has been started up.
- Contact the network administrator for the IP address, subnet mask, and static routes settings.

Note

If you are using Ethernet, take particular care with the IP address, subnet mask and route settings. If any of these items an error, you may be completely unable to access the system via Ethernet and it may only be possible to recover the problem by using the initial setup tools to correct the error.



PPP

"Use PPP"
Tick this option to allow PPP connections using a modem cards.

"PPP Local Address"
Sets the local address. For PPP connections, this address is used for the VB101 by the PPP server for the VB101.

"PPP Remote Address"
Sets the remote address. For PPP connections, this address is used for the VB101 by the Viewer PC or the router PPP client.

"PPP Account List"
PPP connection is only permitted to accounts with combinations of a name and a passwords that match those included in this list. (Passwords are not displayed in the list.) If you select an account and click the "Delete" button, the combination of a account name and password is removed from the list. Up to 10 accounts can be registered on the list.

"Add PPP Account"
Use this to add account and password combinations to the PPP account list. Enter the account name and password, and click the "Add" button. The account name can be up to 15 characters including alphanumeric characters, underscores and hyphens. Passwords can consist of up to 15 ASCII text characters (space or printable characters).

"Modem max speed"
Select the maximum baud rate as the limit on the Modem speed. The available settings are 4800, 9600, 19,200, 38,400, 57,600 and 115,200. Normally, there is no need to change this setting. Set a low speed when the condition of the line is poor.

"Country Selector"
- When the global modem is used, this
- setting selects the country used by the
- VB101. This setting is ignored if the global
- modem is not used.
-

"Route 1-3"
Use this setting if you require connection routes other than the normal route. You can select either Ethernet or PPP as the interface. Specify the destination route in the Destination and Mask fields. You must specify a gateway address if you are using a router on an Ethernet network.

"Static Route Control"
Route control is required when you are communicating over a wide area network via a router. When you are using both Ethernet and PPP, set the route as required.

"Default Route"
Specifies the same setting as "Default Gateway Address" on the Basic Settings page. Specify the route normally used. You must specify a gateway address if you are using a router on an Ethernet network.

Note

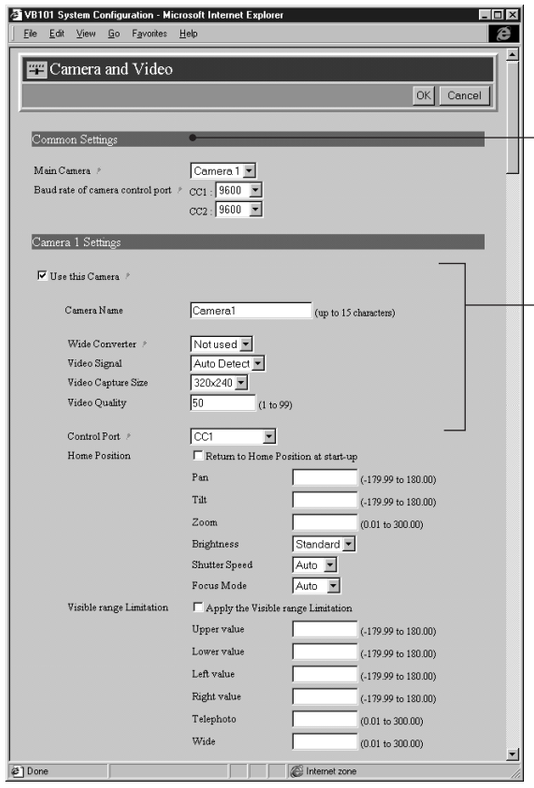
Turn the VB101 off before you insert a modem card.

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Detail Settings

Camera and Video Settings Page

Use this page to set the camera control parameters and the video image size and quality.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
Camera and Video
OK Cancel
Common Settings
Main Camera Camera 1
Baud rate of camera control port CC1 : 9600
CC2 : 9600
Camera 1 Settings
Use this Camera
Camera Name Camera1 (up to 15 characters)
Wide Converter Not used
Video Signal Auto Detect
Video Capture Size 320x240
Video Quality 50 (1 to 99)
Control Port CC1
Home Position Return to Home Position at start-up
Pan (-179.99 to 180.00)
Tilt (-179.99 to 180.00)
Zoom (0.01 to 300.00)
Brightness Standard
Shutter Speed Auto
Focus Mode Auto
Visible range Limitation Apply the Visible range Limitation
Upper value (-179.99 to 180.00)
Lower value (-179.99 to 180.00)
Left value (-179.99 to 180.00)
Right value (-179.99 to 180.00)
Telephoto (0.01 to 300.00)
Wide (0.01 to 300.00)
Done
Internet zone

Common Settings

"Main Camera"
Specifies the camera selected when the VB101 starts up.

"Baud rate of camera control port CC1/CC2"
For CC1 and CC2, select the same baud rate as that set on the camera.

Settings for cameras 1 to 4
The camera1 to 4 correspond to cameras which are connected to V1 to V4.

"Use this Camera"
When you tick this option, this camera is used and the settings below are enabled.

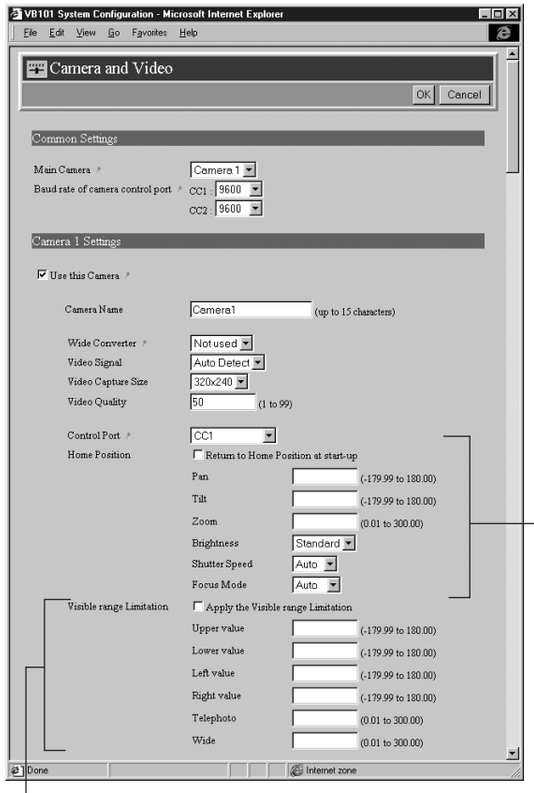
"Camera Name"
Used in the camera selection menu in the WebView Livescope Viewer.

"Wide Converter"
Always select "Used" when a wide converter is mounted on the camera.

"Video Signal"
Select Auto Detect, NTSC or PAL.

"Video Capture Size"
The available settings are 640x240, 320x240 and 160x120.

"Video Quality"
Enter an adjustment setting between 1 and 99. Higher values give better image quality but a slower frame rate since the amount of image data increases.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
Camera and Video
OK Cancel
Common Settings
Main Camera Camera 1
Baud rate of camera control port CC1 : 9600
CC2 : 9600
Camera 1 Settings
Use this Camera
Camera Name Camera1 (up to 15 characters)
Wide Converter Not used
Video Signal Auto Detect
Video Capture Size 320x240
Video Quality 50 (1 to 99)
Control Port CC1
Home Position Return to Home Position at start-up
Pan (-179.99 to 180.00)
Tilt (-179.99 to 180.00)
Zoom (0.01 to 300.00)
Brightness Standard
Shutter Speed Auto
Focus Mode Auto
Visible range Limitation Apply the Visible range Limitation
Upper value (-179.99 to 180.00)
Lower value (-179.99 to 180.00)
Left value (-179.99 to 180.00)
Right value (-179.99 to 180.00)
Telephoto (0.01 to 300.00)
Wide (0.01 to 300.00)
Done
Internet zone

"Control Port"
Four cameras can be connected, but only two of those can be controlled. When these cameras are connected to control port CC1 or CC2, either can be selected. Select "Not controlled" for cameras that are not connected or not controlled.

"Home Position"
The reference position for the camera used at start-up and for picture recording . When you tick the "Return to Home position at start-up" option, the settings below are enabled.

"Pan"
Sets the initial pan position of Camera. Enter an angle between -179.99 and 180.00 degrees.

"Tilt"
Sets the initial tilt position for the camera. Enter an angle between -179.99 and 180.00 degrees.

"Zoom"
Sets the initial value for the camera's angle of zoom. Enter an angle between 0.01 and 300.0.

"Brightness"
Sets the target value for the camera's auto exposure feature. Select "Standard" (for bright subjects) or "Brighter " (for dark subjects).

"Shutter speed "
Sets the camera shutter speed. Select Auto, 1/60 or 1/100.

"Focus Mode"
Sets the focusing mode for the camera. Select "Auto" (auto focus) or "Infinity" (focus fixed at infinity).

"Visible range Limitation"
If you tick the "Apply the Visible range Limitation" option, the settings below are enabled. Use this setting to prevent clients from seeing certain camera angles.

"Upper value, Lower value, Left value, Right value"
Sets the extent of the field of view provided to users. Enter an angle between -179.99 and 180.00 for each setting.
(Specify settings so that the upper value is greater than the lower value and the left value is lesser than the right value.)

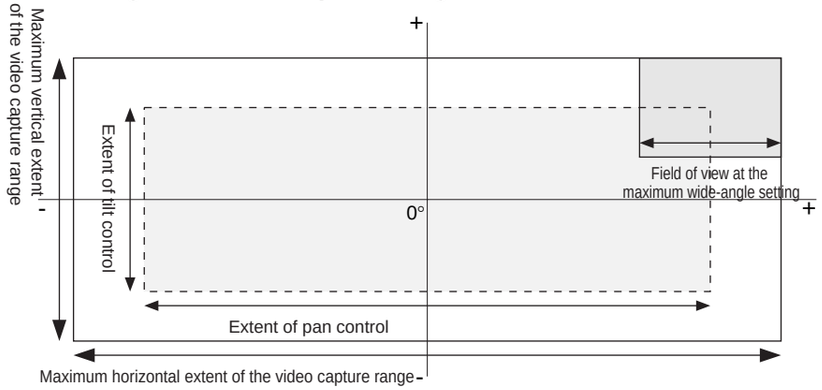
"Telephoto, Wide"
Sets the zoom angles provided to users. Enter a horizontal angle for the field of view of between 0.01 and 300.0 for each setting.
(Specify settings so that the telephoto setting is lesser than or equal to the wide setting.)

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Visible Range Limitation Settings

You can set the visible range by restricting the camera pan, tilt and zoom ratio (field of view angle) settings.

■Controllable range and Video Capture Range



The camera's Controllable range is the angle indicating the camera "direction". The video capture range is larger than the controllable range, because of the "field of view" is centered on the camera position and it protruded from the controllable range.

■Video Capture Range for Each Camera

VC-C4

Controllable range	Angle
Pan control range	-100° to 100°
Tilt control range	-30° to 90°
Zoom control range (with wide converter)	3.7° to 47° (4.6° to 61°)
Horizontal shooting range (with wide converter)	-124° to 124° (-132° to 132°)
Vertical shooting range (with wide converter)	-48° to 108° (-54° to 114°)

VC-C4R

Controllable range	Angle
Pan control range	-170° to 170°
Tilt control range	-90° to 10°
Zoom control range	3.7° to 47°
Horizontal shooting range	-180° to 180°
Vertical shooting range	-108° to 28°

VC-C3

Controllable range	Angle
Pan control range	-90° to 90°
Tilt control range	-30° to 25°
Zoom control range (with wide converter)	4.8° to 48° (6.7° to 67°)
Horizontal shooting range (with wide converter)	-114° to 114° (-124° to 124°)
Vertical shooting range (with wide converter)	-48° to 43° (-55° to 50°)

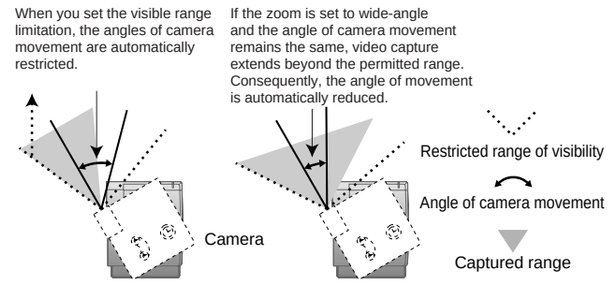
VC-C1 MK II

Controllable range	Angle
Pan control range	-50° to 50°
Tilt control range	-20° to 20°
Zoom control range (with wide converter)	6.1° to 46° (8.2° to 61°)
Horizontal shooting range (with wide converter)	-73° to 73° (-81° to 81°)
Vertical shooting range (with wide converter)	-37° to 37° (-45° to 45°)

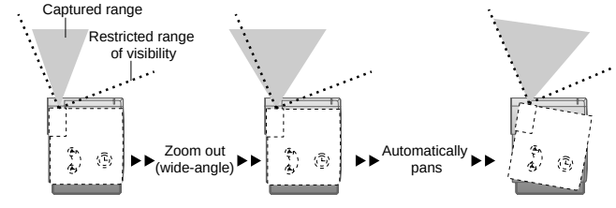
Tip

Restricting the Visibility Range

● **Restrictions on the angle of pan and tilt apply not to camera movement but to the angle of the field of view. When the "wide-angle field" for the zoom setting (visibility angle) is wide, the camera movement angle narrows.**


When you set the visible range limitation, the angles of camera movement are automatically restricted.
If the zoom is set to wide-angle and the angle of camera movement remains the same, video capture extends beyond the permitted range. Consequently, the angle of movement is automatically reduced.
Restricted range of visibility
Angle of camera movement
Captured range
Camera

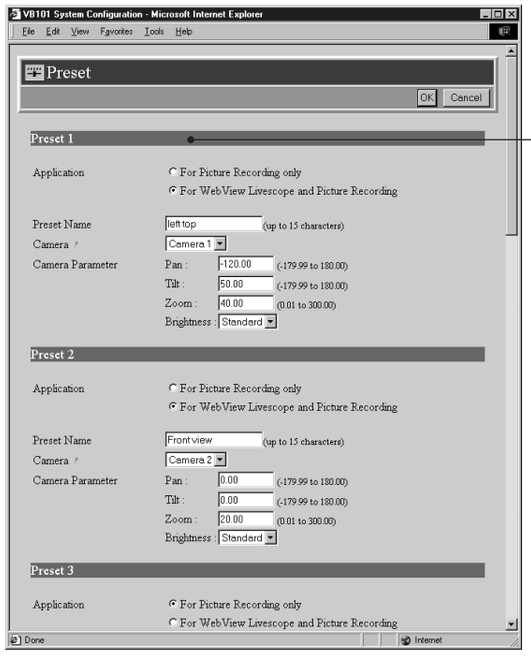
If the visibility range is exceeded because the zoom is set to wide range, the camera angle (pan, tilt) will be adjusted automatically.



● **If the visibility range is restricted, the zooming range may also be restricted.**

Preset Settings Page

Use this page to specify the settings for preset camera positions provided to users.



Presets 1-8

"Application"
Use these options to specify whether this preset can be used only for picture recording (→ P.45) or is also made available in WebView Livescope. If it is also provided in WebView Livescope, always specify the preset name.

"Preset Name"
Enter a name consisting of up to 15 alphanumeric characters.

"Camera"
Selects the camera for which the preset position is set.

"Camera parameter"
Use this to set the video capture settings to be provided.

"Pan, Tilt"
Enter an angle between -179.99 and 180.00.

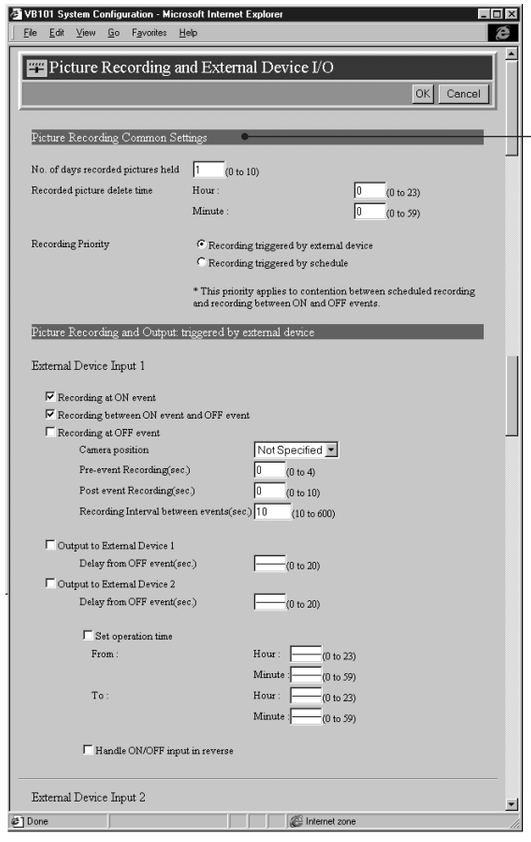
"Zoom"
Enter a horizontal angle for the field of view of between 0.01 and 300.0.

"Brightness"
Sets the target value for the camera's auto exposure feature. Select "Standard" (for bright subjects) or "Brighter " (for dark subjects).

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Picture Recording and External Device I/O Settings Page

Use this page to specify the operating condition for the picture recording function. This page can also be used to control picture recording from an external device (sensor, etc.) and perform still video capture based on a predetermined schedule (up to 1000 images).



Picture Recording Common Settings

"No. of days recorded pictures held"
Specifies how many days the recorded picture data will be kept in memory card. The recorded data which exceeded the keeping days is erased daily at the time specified in "Recoreded picture delete time". In this manner, picture recording function does not keep data on a permanent basis, so picture data must be saved as required by replacing the memory card or using FTP to transfer the data files.

- Picture data files are placed in a directory called **"/card/images"**. (To record pictures, a flash memory card is required.) Files created in "yyyymmddHHMMSSCC" (year, month, day, hour, minute, second, and 1/100 second) format will be listed as "HHMMSSCC.jpg" in the yyyymmdd sub-directory.

"Recoreded picture delete time"
Sets the time at which picture data is deleted.

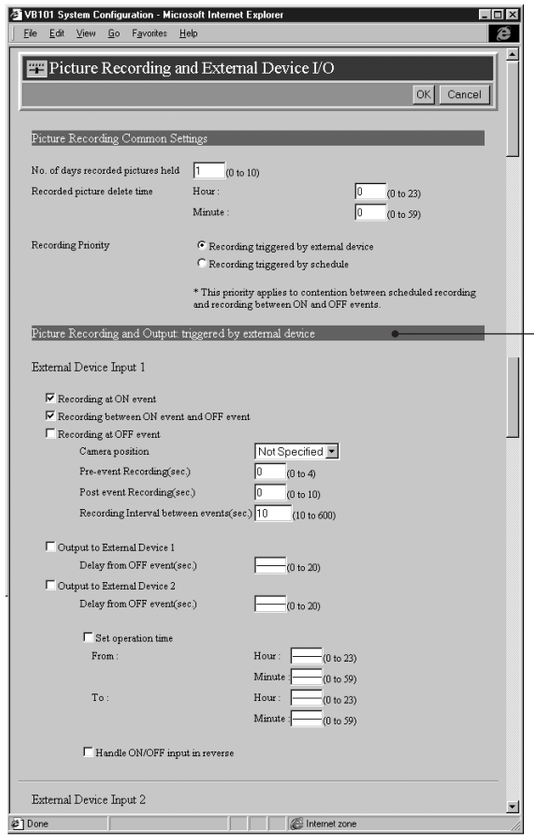
"Recording Priority"
When there is a conflict between the timing of recording specified in a schedule and "ON event to OFF event" recordings controlled from an external device, this setting specifies which recording takes priority. Tick "Recording triggered by external device" or "Recording triggered by schedule". The factory default setting gives priority to external device origin recording.

Note

- **Video images are recorded on flash memory card. Even if the settings on this page are specified, the Picture Recording function does not perform if there is no memory card in the VB101 slot.**
- **The amount of data that can be recorded for a still image is less than 32 KB. If this amount is exceeded, the image will not be recorded. The number of images that can be recorded depends on flash memory card (sold separately) capacity, however the maximum number of images that can be recorded is 1000.**

Tip

The amount of data for a still image varies depending on the settings for picture size and picture quality (→ P.40), and the subject. As a guide, approximately 5-10 KB is the standard when the picture size is set to 320x240 and the picture quality is set to 30. (In some cases this may be exceeded) To check the amount of data for a still image, select "View"-"Video information" from the menu after you start up the helper viewer, then check the "Size" value.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
Picture Recording and External Device I/O
OK Cancel
Picture Recording Common Settings
No. of days recorded pictures held 1 (0 to 10)
Recorded picture delete time Hour : 0 (0 to 23)
Minute : 0 (0 to 59)
Recording Priority
Recording triggered by external device
Recording triggered by schedule
* This priority applies to contention between scheduled recording and recording between ON and OFF events.
Picture Recording and Output triggered by external device
External Device Input 1
Recording at ON event
Recording between ON event and OFF event
Recording at OFF event
Camera position Not Specified
Pre-event Recording(sec.) 0 (0 to 4)
Post event Recording(sec.) 0 (0 to 10)
Recording Interval between events(sec.) 10 (10 to 600)
Output to External Device 1
Delay from OFF event(sec.) (0 to 20)
Output to External Device 2
Delay from OFF event(sec.) (0 to 20)
Set operation time
From : Hour : (0 to 23) Minute : (0 to 59)
To : Hour : (0 to 23) Minute : (0 to 59)
Handle ON/OFF input in reverse
External Device Input 2
Done
Internet zone

Picture Recording and output : triggered by external device
Use this setting to operate the Picture Recording function when recording is performed in conjunction with an external device such as a sensor or switch.
For a detailed example of actual operation, see Chapter 5, "Using the Picture Recording Function". (→ P.79)

"External Device Input"

"Recording at ON event"
Tick this option to record pictures when an "ON" input signal is received from an external device.

"Recording between ON event and OFF event"
Tick this option to record pictures for as long as an "ON" input continues from the external device.

"Recording at OFF event"
Tick this option to record pictures when an "OFF" input is detected from an external device.

"Camera Position"
Selects the camera angle used when pictures are recorded. Select "Not specity", "Home 1" to "Home 4" or "Preset 1" to "Preset 8".

"Pre-event Recording (sec.)"
When you want to save the pictures that preceded an ON or OFF event, use this setting to enter the required number of seconds.

"Post-event Recording (sec.)"
When you want to save the pictures that followed an ON or OFF event, use this setting to enter the required number of seconds.

"Recording Interval between events"
Records pictures at set intervals between ON and OFF event. Specify a value between 10 and 600 seconds as the sampling interval.

"Output to External Device 1/2"
Tick this option to control output for external devices.

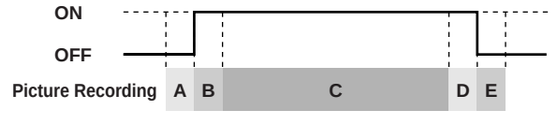
"Delay from OFF event (sec.)
When controlling output to an external device and output must retain ON after input is set to OFF, use this setting to specify a delay of up to 20 seconds.

"Set operation time"
When you tick this option, input from an external device is limited to the operation time specified below. Enter the start time and end time for the intervals during which external input is acceptable.

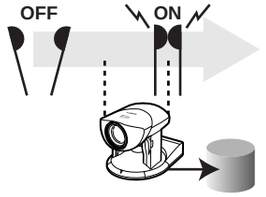
"Handle ON/OFF input in reverse"
On some devices, ON and OFF are reversed. Use this setting for such devices.

Tip

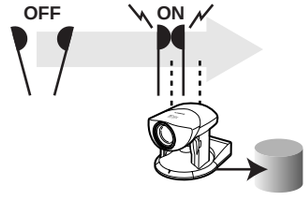
Picture Recording triggered by External Devices



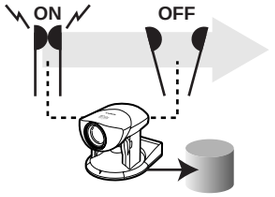
● **Picture recording triggered by an external device can be performed based on the timing of ON and OFF events or by recording pictures during the ON state.**



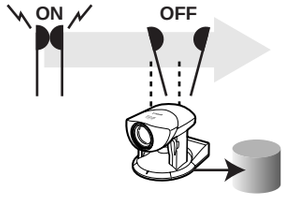
A: Pre-event recording for an ON event
(Fixed at 1 sec. intervals. -4 to 0.)



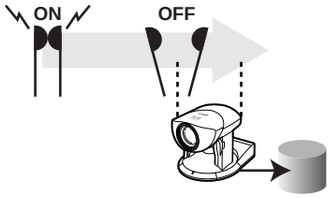
B: Post event recording for an ON event
(Fixed at 1 sec. intervals. 0 to 10.)



C: Recording during the ON state
(exclude B and D)

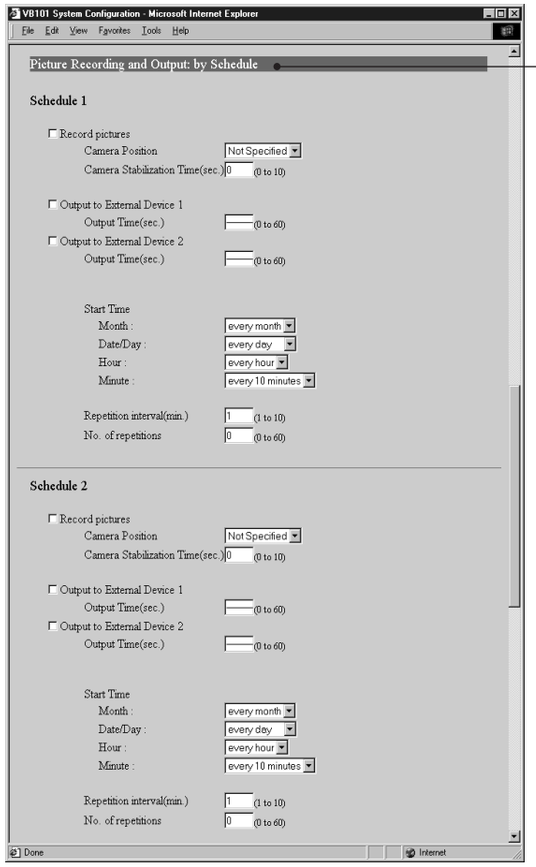


D: Pre-event recording for an OFF event
(Fixed at 1 sec. intervals. -4 to 0.)



E: Post event recording both for an OFF event
(Fixed at 1 sec. intervals. 0 to 10.)

- For A and D, recording is controlled to the pre-event recording time, and for B and E, it is controlled to the post event recording time.
- In the case of C, the "Recording between ON event to OFF event" setting is used (between 10 and 600 seconds).



Picture Recording and Output: by Schedule
Use this setting to operate the picture recording function based on a schedule set beforehand. For a detailed example of actual operation, see Chapter 5, "Using the Picture Recording Function". (→ P.79)

"Schedule 1 to 4"

"Record pictures"
When this option is ticked, picture recording is performed based on the settings below.

"Camera Position"
Selects the camera angle used for picture recording. Select "Not Specified", "Home 1" to "Home 4" or "Preset 1" to "Preset 8".

"Camera Stabilization Time (sec.)"
When the camera moves to a new photography position, this setting specifies the delay time for the camera to stabilize before still video is captured.

"Output to External Device 1/2"
Tick this option to output ON to external device 1 or 2 in accordance with the Start Time, Repetition interval (min.) and No. of repetitions settings specified below.

"Output Time (sec.)"
Sets the duration for which output is ON at the specified time. If zero is specified, output is only ON momentarily.

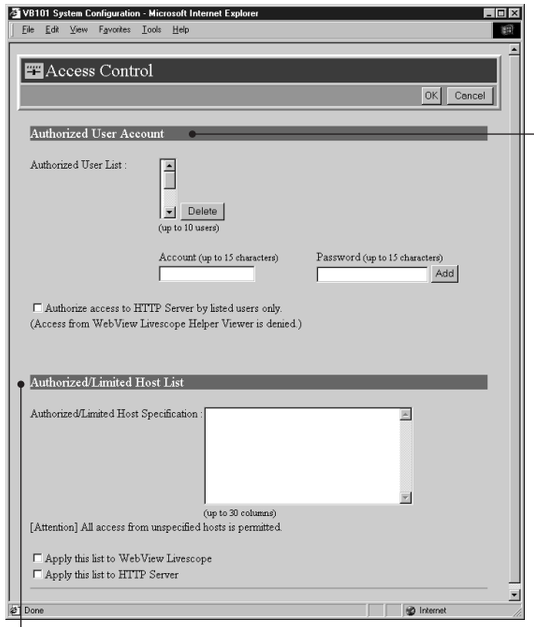
"Start Time"
Sets the start time for picture recording and output to an external device triggered by the schedule.

"Repetition interval (min.)/
No. of repetitions"
Sets the execution interval and the number of times for repeated picture recording and output to an external device following the start time.

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Access Control Settings Page

From this page, you can restrict access to the VB101 to specific authorized users only, and you can control who may and may not access from a specific host. In either case, access by restricted clients is prohibited.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Access Control
OK Cancel
Authorized User Account
Authorized User List :
Delete
(up to 10 users)
Account (up to 15 characters)
Password (up to 15 characters)
Add
Authorize access to HTTP Server by listed users only.
(Access from WebView Livescope Helper Viewer is denied.)
Authorized/Limited Host List
Authorized/Limited Host Specification :
(up to 30 columns)
[Attention] All access from unspecified hosts is permitted.
Apply this list to WebView Livescope
Apply this list to HTTP Server
Done
Internet

Authorized user account

"Authorized user list"
Only accounts registered in this list are permitted to connect to the VB101. Up to 10 users can be registered.

"Delete"
Select a user account and click the delete button to remove the user from the list.

"Add"
You can add authorized users to the list by entering their account name and password.

"Authorize access to HTTP Server by listed users only"
When this option is ticked, only users registered in the list are permitted to connect to the VB101.

- Access using the WebView Livescope Helper Viewer and WebView Livescope MV is prohibited.

Authorized/Limited Host Specification

"Authorized/Limited Host List"
In this list, you can describe the details of how access to the hosts is permitted or denied.
See the next page for the description format.

"Apply this list to WebView Livescope"
If you tick this option, the listed hosts are used as the hosts that can access the WebView Livescope server.

"Apply this list to HTTP server"
If you tick this option, the listed hosts are used as the hosts that can access the HTTP server.

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Differences in Access Control by Application

When Users are Restricted

Client Type	Permissible Users
Web browser	Administrator and registered users
WebView Java Viewer	Administrator and registered users
WebView Helper Viewer	Administrator (use The Administrator Viewer)
FTP client	System administrator only

When Hosts are Restricted

Client Type	Permissible Hosts
Web browser	Authorized hosts only
WebView Java Viewer	Authorized hosts only
WebView Helper Viewer	Authorized hosts only
FTP client	N/A

Authorized/Limited Host List Descriptions

The Host Restriction function applies to hosts running client applications such as viewer. Access restrictions are imposed using a list made up of one or more entries written using the format described below.

Listing Format

[!]addr[/mask] (items in square brackets are optional)

- "addr" and "mask" are written in standard IP address format and specify the range of IP addresses.
- Let host IP address is A, if the value of A masked by "mask" in the bit pattern matches the "addr" value, this indicates that A belongs to addr/mask.
- When you provide a host IP address A and want to determine whether access is authorized or denied for that host, the entries to which A belongs are searched from the top of the list. If the retrieve entry begins with an exclamation mark (!), access is prohibited. If not, access is permitted.
- Redundant or contradictory entries included in the list are deleted. The order in which the list is displayed can be altered so that it begins with specific entries or so that generic entries are displayed from the end.
- If the given address does not belong to any of the entries, access is authorized.

Listing Guidelines

Descriptions in the Authorized/Limited Host List are extremely complex, and errors in the settings can result in access being prohibited where it should be permitted. To avoid this, follow the guidelines given below with great care.

1.Left-align the mask

172.20.0.0/255.255.0.0 -- Correct

172.0.28.0/255.0.255.0 -- Incorrect

2.Use prohibited entries mainly rather than permitted entries.

!172.20.26.0/255.255.255.0

!172.20.28.0/255.255.255.0

3.Make permitted entries subsets of prohibited entries.

172.20.26.0/255.255.255.0

172.20.28.0/255.255.255.0

!172.20.0.0/255.255.0.0

4.List specific entries before generic entries.

Not like this:

!172.20.0.0/255.255.0.0

172.20.28.0/255.255.255.0

Like this:

172.20.28.0/255.255.255.0

!172.20.0.0/255.255.0.0

5.Avoid dangerous settings.

0.0.0.0/255.255.255.255

10.0.0.0/0.0.0.0

Such specification are not prohibited, but will effectively prohibit access from all hosts. Avoid entry !0.0.0.0/0.0.0.0 in particular wherever possible.

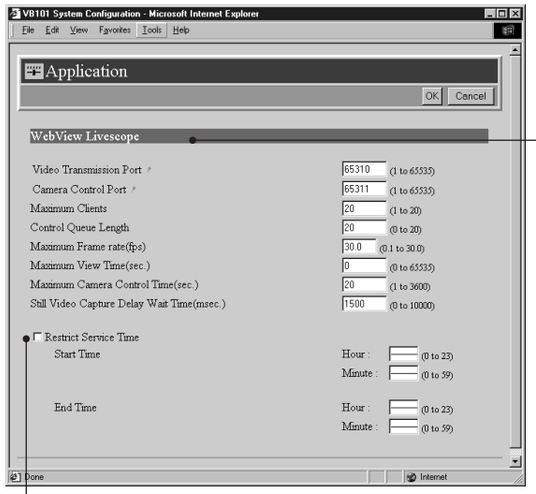
Note

- **The default value for "mask" is 255.255.255.255.**
- **If you do not make a list, access is permitted to all hosts.**
- **If the list provided prohibits access for all hosts, the Host Limiting function is disabled and access is permitted to all hosts.**
- **If you set the host limitations incorrectly, access to the settings page itself may be prohibited. In this event, the problem can only be recovered by restoring the factory default settings.**

Application Settings Page

Use this page to specify settings for each application. Only the application selected as the "Target Application" in the Basic Settings page is shown on this page.

■When WebView Livescope is selected


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Application
OK Cancel
WebView Livescope
Video Transmission Port 65310 (1 to 65535)
Camera Control Port 65311 (1 to 65535)
Maximum Clients 20 (1 to 20)
Control Queue Length 20 (0 to 20)
Maximum Frame rate(fps) 30.0 (0.1 to 30.0)
Maximum View Time(sec.) 0 (0 to 65535)
Maximum Camera Control Time(sec.) 20 (1 to 3600)
Still Video Capture Delay Wait Time(msec.) 1500 (0 to 10000)
Restrict Service Time
Start Time Hour : (0 to 23) Minute : (0 to 59)
End Time Hour : (0 to 23) Minute : (0 to 59)
Done
Internet

WebView Livescope

"Video Transmission Port"
Sets the TCP port number for the WebView Livescope video transmission protocol. Enter an integer between 1 and 65535. The default setting is 65310.

"Camera Control Port"
Sets the TCP port number for the WebView Livescope camera control protocol. Enter an integer between 1 and 65535. The default setting is 65311.

"Maximum Clients"
Sets the maximum number of clients that can be connected using the WebView Livescope protocol. Enter an integer between 1 and 20.

"Control Queue Length"
Sets the length of the queue when multiple clients are waiting for control authority under the WebView Livescope protocol. Enter an integer between 0 and 20.

"Maximum Frame rate (fps)"
Sets the maximum number of frames captured per second under the WebView Livescope protocol. Enter a fixed point between 0.1 and 30. The maximum frame rate is 30 fps.

"Maximum View Time (sec)"
Sets the maximum time for which a WebView Livescope protocol connection can be maintained. Enter an integer between 1 and 65535. A setting of 0 disables the time limitation (unlimited connection time).

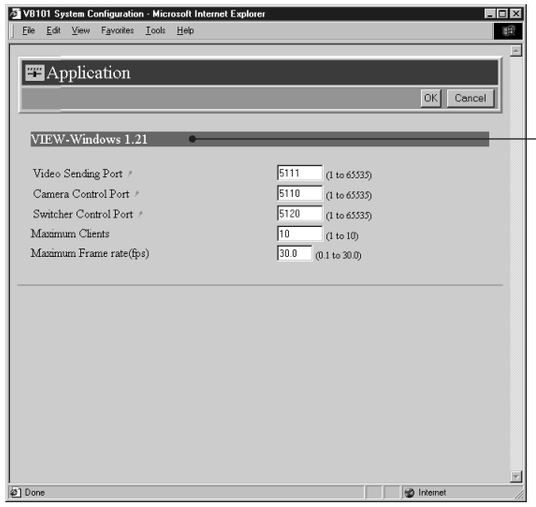
"Maximum Camera Control Time (sec)"
Sets the maximum time for which camera control authority can be maintained under the WebView Livescope protocol. Enter an integer between 1 and 3600.

"Still Video Capture Delay Wait Time (msec.)"
When the GetStillImage command has been requested, this setting specifies the delay to allow the camera to stabilize before still video capture is performed. Enter an integer between 1 and 10000. The maximum delay is 10000 milliseconds.

- "Set Service time for user"
  When you want to set service reception for WebView Livescope users, tick this option and specify the From and To times.

View-Windows is for sale in Japan only, it cannot be used in any other country.

■When VIEW-Windows 1.21 is selected


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Application
OK Cancel
VIEW-Windows 1.21
Video Sending Port 5111 (1 to 65535)
Camera Control Port 5110 (1 to 65535)
Switcher Control Port 5120 (1 to 65535)
Maximum Clients 10 (1 to 10)
Maximum Frame rate(fps) 30.0 (0.1 to 30.0)
Done
Internet

VIEW-Windows 1.21

"Video Transmission Port"
Sets the TCP port number for the VIEW-Windows 1.21 video transmission protocol. The default setting is 5111.

"Camera Control Port"
Sets the TCP port number for the VIEW-Windows 1.21 camera control protocol. Enter an integer between 1 and 65535. The default setting is 5110.

"Switcher Control Port"
Sets the TCP port number for the VIEW-Windows 1.21 switcher control protocol. Enter an integer between 1 and 65535. The default setting is 5120.

"Maximum Clients"
Sets the maximum number of clients that can be connected using the VIEW-Windows 1.21 protocol. Enter an integer between 1 and 10.

"Maximum Frame rate (fps)"
Sets the maximum number of frames captured per second under the VIEW-Windows 1.21 protocol. Enter a real number between 0.1 and 30.

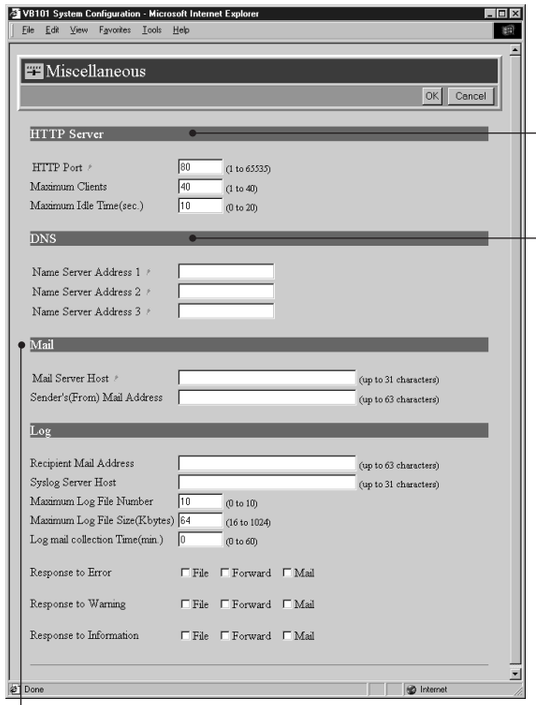
Note **Take care when changing port numbers. Port numbers do not need to be changed in normal use.**

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Detail Settings

Miscellaneous Settings Page

Use this page to specify various other settings.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Miscellaneous
OK Cancel
HTTP Server
HTTP Port 80 (1 to 65535)
Maximum Clients 40 (1 to 40)
Maximum Idle Time(sec.) 10 (0 to 20)
DNS
Name Server Address 1
Name Server Address 2
Name Server Address 3
Mail
Mail Server Host (up to 31 characters)
Sender's(From) Mail Address (up to 63 characters)
Log
Recipient Mail Address (up to 63 characters)
Syslog Server Host (up to 31 characters)
Maximum Log File Number 10 (0 to 10)
Maximum Log File Size(Kbytes) 64 (16 to 1024)
Log mail collection Time(min.) 0 (0 to 60)
Response to Error File Forward Mail
Response to Warning File Forward Mail
Response to Information File Forward Mail
Done
Internet

HTTP Server

"HTTP Port"
Sets the TCP port number for the HTTP. Enter an integer between 1 and 65535. As a general rule, No. 80 is used.

"Max Clients"
Sets the number of HTTP connections that can be made. The maximum number of connections that can be made is 40. Enter an integer between 1 and 40. This sets the maximum number of clients for the WebView Livescope viewer and the Web server.
WebView Livescope viewer: because the Java viewer and helper viewer use 2 HTTP connections , it is possible to simultaneously connect a maximum of 20 clients when the setting "40" is entered.

"Maximum Idling Time (sec)"
Sets the time-out time for KeepAlive connections. Enter an integer between 0 and 20. The maximum wait time is 20 seconds.
If you specify 0, KeepAlive connections are prohibited.

DNS
Sets the domain name server address.

"Name Server Address 1 to 3"
Enter the addresses.

- Enter the addresses from the top down. If you are only registering 1 or 2 addresses, the remaining fields can be left blank.

Mail
Log messages are emailed to the specified recipient address via the specified mail forwarding server using the SMTP.

"Mail Server Host"
Specifies the SMTP server.

"Sender's (From) Mail Address"
Specifies the log mail sender.

Note

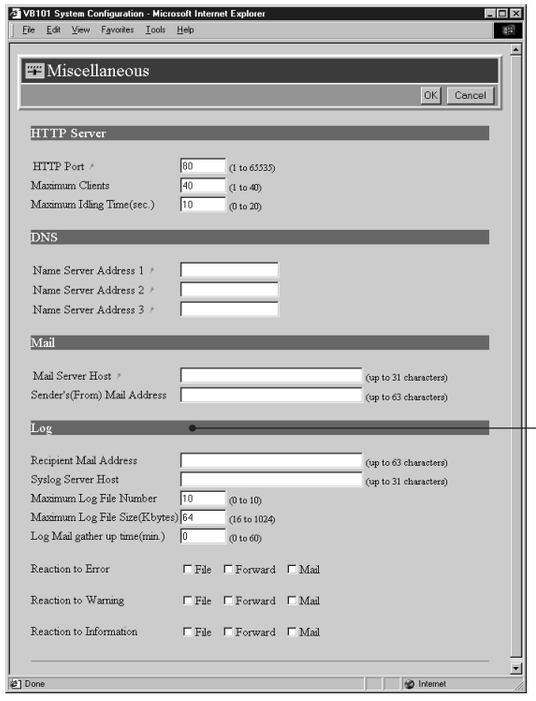
"Max clients" settings for the WebView Livescope viewer

"WebView Livescope protocol"* and "HTTP protocol" are used in connections from the helper viewer and Java viewer to the camera server. Synchronous "Max clients" settings for each of these viewers are as follows.

- **Helper viewer**
  Set in "Max clients" on p.52 and p.54.
  - A maximum of 20 clients can be connected simultaneously with WebView Livescope protocol
  - A maximum of 20 clients can be connected simultaneously with HTTP protocol
- **Java viewer**
  Set in "Max clients" on p.54.
  - A maximum of 20 clients can be connected simultaneously with HTTP protocol

The helper viewer, Java viewer and Web server can each share HTTP protocol connections. A maximum of 40 HTTP protocol connections can be accessed.

* "WebView Livescope protocol" supports the helper viewer only


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Miscellaneous
OK Cancel
HTTP Server
HTTP Port 80 (1 to 65535)
Maximum Clients 40 (1 to 40)
Maximum Idling Time(sec.) 10 (0 to 20)
DNS
Name Server Address 1
Name Server Address 2
Name Server Address 3
Mail
Mail Server Host (up to 31 characters)
Sender's(From) Mail Address (up to 63 characters)
Log
Recipient Mail Address (up to 63 characters)
Syslog Server Host (up to 31 characters)
Maximum Log File Number 10 (0 to 10)
Maximum Log File Size(Kbytes) 64 (16 to 1024)
Log Mail gather up time(min.) 0 (0 to 60)
Reaction to Error File Forward Mail
Reaction to Warning File Forward Mail
Reaction to Information File Forward Mail
Done
Internet

Log

"Recipient Mail Address"
Specifies the log mail recipient.

"Syslog Server Host"
Sets the Syslog server.

"Maximum Log File Number"
Sets the maximum number of log files saved. Enter an integer between 1 and 10. The maximum number is 10.

"Maximum Log File Size (K bytes)"
Sets the maximum log file size. Enter an integer between 16 and 1024. The maximum size is 1024 KB.

"Log mail collection time (min.)"
Log messages containing errors, warnings and other information are collected for a set period beginning from the first log entry. This setting specifies that collection period. Enter an integer between 0 and 60. The maximum time is 60 minutes.

"Response to Error/Warning/Information"
Tick the "File" option to save log messages to files.
Tick the "Forward" option to send the log messages to a Syslog server.
Tick the "Mail" option to send the log messages by email.

Note

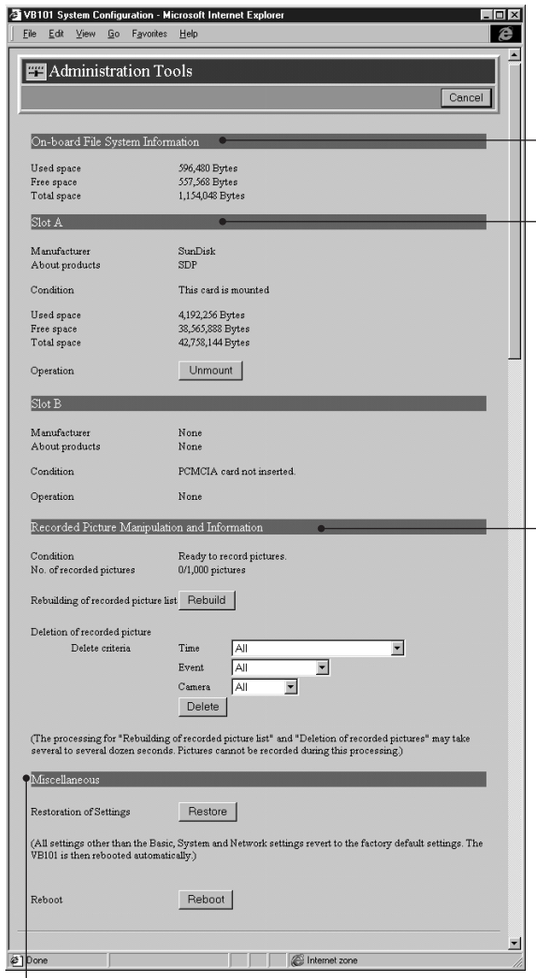
- **The log message will be stored on the flash memory card (sold separately). Even if settings are made for this page, this function will not operate unless a flash memory card is inserted into the slot on the main unit.**
- **See Chapter 6 (→P.92) for log message details.**
- **The log message for external device input (sensor, etc.) is A023. If the "log mail gather up time" has been set, this message will be sent after a specified waiting time.**

Tip

- **Log files will be created in the /card/logs directory (a flash card is required to save log messages in a file). The most recent log file will be saved as "log". The log file size is specified in "Maximum log file size" and if the log file exceeds the specified size, back-up files named "log.0..." are created.**
- **Only the number of back-up log files that are specified in "Maximum number of log files (N)" will remain. These will be listed in the order, "log.0, log.1,..., log.N". For example, if the maximum number of log files is set to 10, files named "log.0, log.1,..., log.9" will be created in the same directory. The file named "log.0" is the most recent back-up file (the most recent log file is listed as "log").**
- **`Because log files will be overwritten in order after the number of files specified in "Maximum number of log files" have been created, maintenance should be carried out periodically.**

Click the [OK] button to change the settings. To discard the changes, click the [Cancel] button. This returns you to the settings title page.

Administration Tools Page


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Go Favorites Help
Administration Tools
Cancel
On-board File System Information
Used space 596,480 Bytes
Free space 557,568 Bytes
Total space 1,154,048 Bytes
Slot A
Manufacturer SunDisk
About products SDP
Condition This card is mounted
Used space 4,192,256 Bytes
Free space 38,565,888 Bytes
Total space 42,758,144 Bytes
Operation Unmount
Slot B
Manufacturer None
About products None
Condition PCMCIA card not inserted.
Operation None
Recorded Picture Manipulation and Information
Condition Ready to record pictures.
No. of recorded pictures 0/1,000 pictures
Rebuilding of recorded picture list Rebuild
Deletion of recorded picture
Delete criteria Time All
Event All
Camera All
Delete
(The processing for "Rebuilding of recorded picture list" and "Deletion of recorded pictures" may take several to several dozen seconds. Pictures cannot be recorded during this processing.)
Miscellaneous
Restoration of Settings Restore
(All settings other than the Basic, System and Network settings revert to the factory default settings. The VB101 is then rebooted automatically.)
Reboot Reboot
Done
Internet zone

On-board File System Information
The On-board File System displays the used space, free space and total space (used space + free space) in bytes.

Slot A/B
If a PCMCIA card, used for communications and storage, is inserted into the slot, the manufacturer and the "About products" information is displayed. Depending on the card type and its status, the operation buttons are displayed and the card status can be controlled. The card slots are labelled A and B from the bottom upwards.

Recorded Picture Manipulation and Information
This section displays the number of recorded pictures and the status of recorded picture processing. The maximum number of pictures that can be recorded is 1000. Under certain circumstances, the "Rebuilding of recorded picture list" and "Deletion of recorded pictures" buttons may be displayed, and if the images cannot be recorded the reason will be displayed.

"Rebuilding of recorded picture list"
Normally. there is no need to reconstruct the picture list. Click this button if you have removed a memory card and modified the content of that memory card (erased files, etc.) on another PC.

"Deletion of recorded pictures"
Deletes pictures stored on a card. Select one of the settings below and then click the "Delete" button.

"Time"
Select the period of time following the shooting of the pictures after which the pictures are deleted.

"Event"
Select whether the images to be deleted are those where shooting was controlled from an external device or according to a schedule. You can also select a combination of the two.

"Camera"
Select camera by which the pictures were shot.

Miscellaneous

"Restoration of Settings"
All but the Basic Settings, System settings and Network settings will back to the factory shipment settings. After this process, it will be rebooted automatically.

"Reboot"
Reboots the VB101.

Note **We recommend that you make a note of current server settings before you restore the default settings in "Restore Settings" (→P.106).**

Click the [Cancel] button to exit from this page. This returns you to the settings title page.

Chapter 4

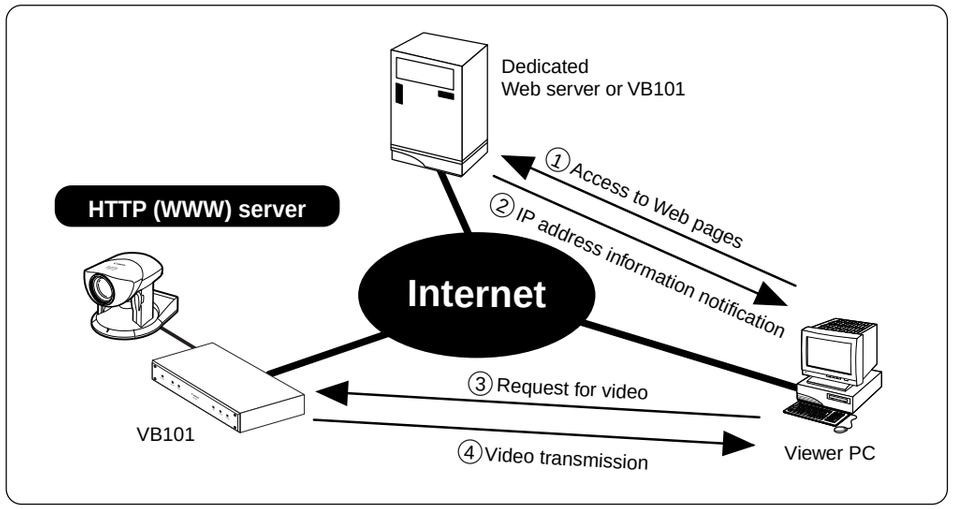
Creating Web Pages

This chapter describes how to use the VB101 to webcast information.

Picture data can be transmitted in various ways, including displaying video or still images and displaying multiple images on a web page.

Web Pages for Video Transmission

To transmit picture data by VB101, you create a dedicated web page. The viewers that can be used with the VB101 are "Java Viewer (with or without camera control function)" and "Helper Viewer", and detailed parameters can be specified for each of these. The person sending the data determines which of these viewers is supported and must create the Web page for the viewer.



If you select a link requesting video in step ①, a file that includes the IP address information for the VB101 is sent from the Web server in step ②. If you are using the Java version, the applet is downloaded to the viewer PC from the VB101 in response to the request in step ③ and the video request is then initiated.

Note

- **File Names**
  The VB101 can handle file names consisting of up to 8 characters followed by a 3-character extension. Note that the names of applets built into the VB101 are exceptions to this rule.
- **Refer to step 3 on P.25 for information on saving content.**

Tip

You can use the Language setting function for the Browser to create a multi-lingual Web site. For example, if you set the French-language top page as index-fr.htm and the English-language top page as index.htm and supply users with a URL address terminates in slash, such as http://vb101/sample/, the server will transmit a file that corresponds with the language setting for the Browser. For further information on the Language setting function for the Browser, refer to the Browser Help.

Features of the Java Viewers

These viewers are supplied as Java applets. They run on Web browsers that are Java-capable, such as the Netscape Navigator and Microsoft Internet Explorer browsers. The applets are downloaded from the camera server to the Web browser and are then run by the Web browser. The features of the Java Viewers are described below.

- **Video transmission and camera operation using the WebView-HTTP protocol. Penetrate firewalls to access external sites.**
- **Because they are automatically downloaded, the Java Viewers do not need to be pre-installed by the client.**
- **Java Viewers run on a wide variety of platforms .**

Tip

Because the Java applets are downloaded using the HTTP protocol when the viewer starts up, the start up time is longer than the Helper Viewer.

Java Viewer Types

Two Java Viewers are "LiveApplet", which has video display and camera control functions, and "Glimpse", which only has video display functions. Because both viewers use WebView-HTTP as the transfer protocol, they do not require special settings to penetrate firewalls.

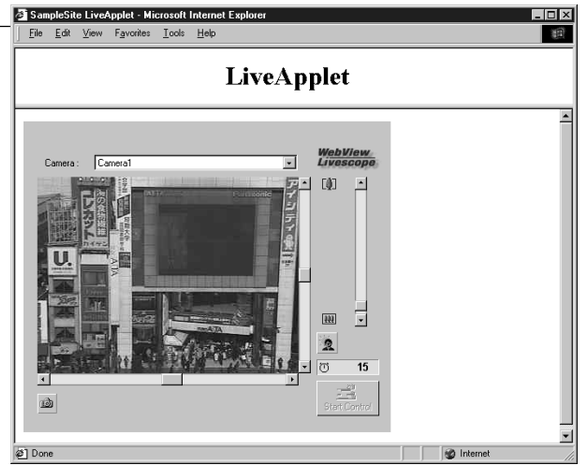
■Viewer Types

Viewer Name	Functions
LiveApplet	①Displays video images from the camera server. ②Allows camera control. ③Allows overlays and superimposition of bitmaps in the video frame. ④Because video is not displayed until the viewer has finished downloading, video display takes longer than with the Helper Viewer.
Glimpse	①Allows the video transmission interval to be set. ②Downloading is fast because it has only simple functions and is small.

Java Viewer

LiveApplet

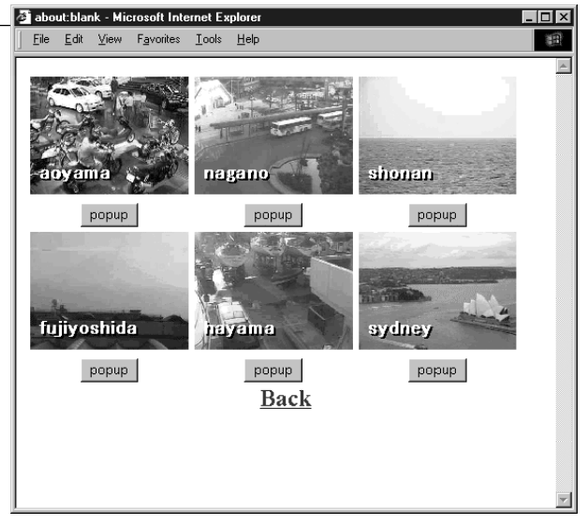
Video display function
Camera control function



Java Viewer

Glimpse

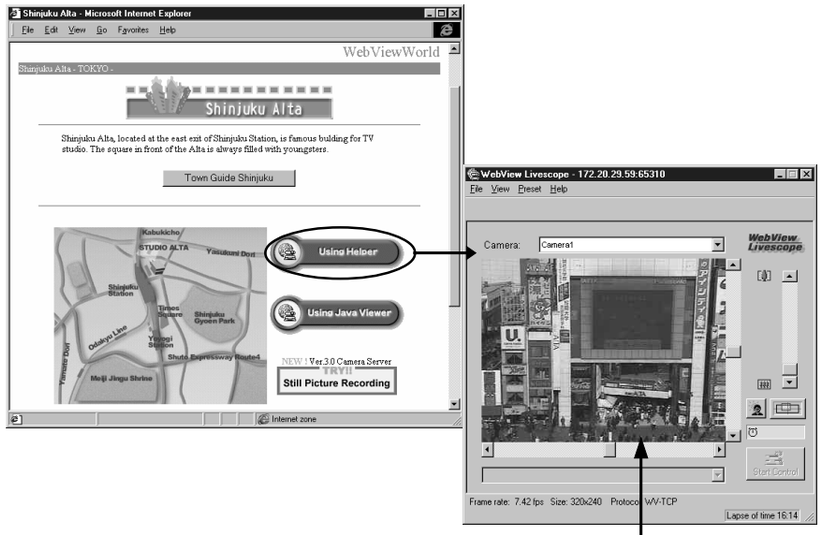
Video display function



Features of the Helper Viewer

The Helper Viewer is an application which is launched from a Web browser. Unlike the Java Viewer, it must be pre-installed on the client's computer. The features of the Helper Viewer are described below.

- **Must be pre-installed, but once installed, start-up time is quick and operation is stable.**
- **The Helper Viewer can use WebView-TCP protocol as well as WebView-HTTP protocol and can penetrate firewalls to access external sites.**
- **Can be run as a stand-alone application.**


Shinjuku Alta - Microsoft Internet Explorer
File Edit View Go Favorites Help
WebViewWorld
Shinjuku Alta - TOKYO -
Shinjuku Alta
Shinjuku Alta, located at the east exit of Shinjuku Station, is famous building for TV studio. The square in front of the Alta is always filled with youngsters.
Town Guide Shinjuku
Using Helper
Using Java Viewer
NEW! Ver.3.0 Camera Server TRY!!
Still Picture Recording
Internet zone
WebView Livescope - 172.20.29.59:65310
File View Preset Help
Camera: Camera1
WebView Livescope
Start Control
Frame rate: 7.42 fps Size: 320x240 Protocol: WV-TCP
Lapse of time 16:14

Appears in a separate window from the browser.

Note

As of Helper Viewer version 3.0 a panorama display function is provided. However, the VB101 does not support shooting or transmission of panorama images. Consequently, if the Panorama display button is clicked in Helper Viewer version 3.0 or later, a blank Panorama window appears. On the Panorama window, frames appear showing the camera position and field of view, and the camera can be controlled by dragging these frames (see viewer manual).

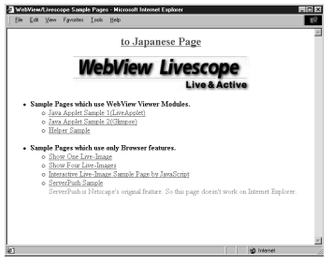
Viewing Sample Pages

Ready-made video transmission sample pages are provided with the VB101. Follow the procedure below to view these pages. Refer to these pages when creating your own Web pages.

Viewing the Pages

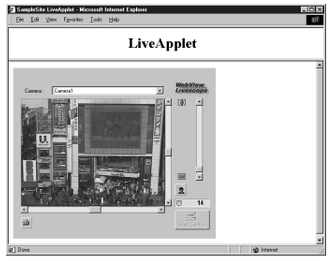
1 Launch your Web browser and enter the following URL:
http://192.168.100.1*/sample/
* The underlined portion is a sample IP address. Enter the actual IP address of the camera server.

2 The page shown below appears with links to the other sample pages. Click on the link to the sample page you want to view.



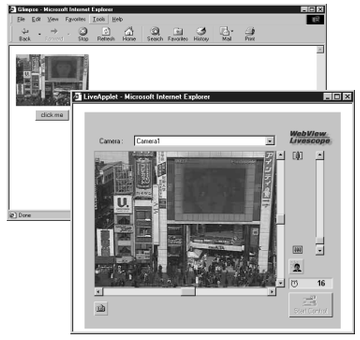
●Examples of sample pages

JavaApplet sample 1



This is a LiveApplet sample page which transmits live pictures from the video and allows users to control the camera.

JavaApplet sample 2

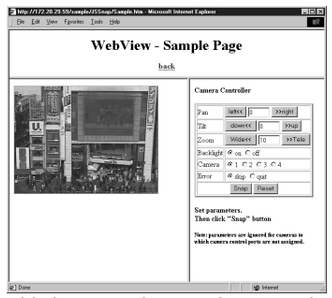


This is a sample page which displays live video at a low frame rate. You can also click to use LiveApplet to operate the camera at a high rate.

Sample layout for 4 still images

This sample page shows the layout for four still video images.

Still image request page using JavaScript



This is a sample page for an applet in which the user specifies the camera control parameters and a live still video image is displayed.

Using a Java Viewer to Transmit Video Images

This section describes how to use the Java Viewers to provide video images. Application examples are also given.

Using a Java Viewer to Create a Web page

When you use a Java Viewer, the viewer applet to be used must be incorporated into the web page you provide. However, this is not especially difficult. The page can be created using the HTML normally used to include an applet.

LiveApplet

```
<applet codebase="http://192.168.100.1*/-wvdoc-01-/LiveApplet/"
    code="LiveApplet.class" archive="LiveApplet.zip"
    width=450 height=380>
<param name=url     value="http://192.168.100.1*/">
<param name=cabbase value="LiveApplet.cab">
</applet>
```

Glimpse

```
<applet codebase="http://192.168.100.1*/-wvdoc-01-/Glimpse/"
    code="Glimpse.class" archive="Glimpse.zip"
    width=160 height=120>
<param name=url     value="http://192.168.100.1*/">
<param name=cabbase value="Glimpse.cab">
</applet>
```

Enter the parameters required by the applet between the <applet> -</applet> tags.
Use the <param> tag for parameters other than the common attributes for applets (codebase, code, archive, width and height).

* The underlined portion is a sample IP address. Enter the actual IP address of camera server.

Tip

In Netscape Navigator 3.X, <param> tag values may not be read correctly depending on the character codes used in the page. If this occurs, the problem can be remedied by specifying a "ISO-8859-1" as the character set in the <meta> tag at the beginning of the page in which the applet is running.

Example:

```
<meta http-equiv ="CONTENT-type" CONTENT="text/
html;charset=ISO-8859-1">
```

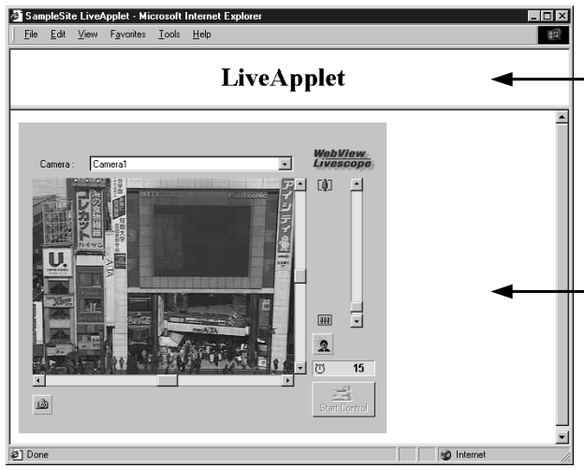
However, if the <meta> tag is used, some characters encoded by the scheme other than iso-8859-1 will not be displayed correctly. if you want to use foreign languages in the same page, consider using the frames to construct the page.

Using a Java Viewer to Transmit Video Images

Example of Using a Java Viewer to Create a Web page

This section describes an example in which a Java Viewer is used to create a Web page.
Use this example to create your own original Web page.

Embed the Java Viewer, and display a text in a separate frame.



1 Frame settings

2 The text displayed in a separate frame

3 Frame with the embedded Java Viewer

Tip

● **Writing IP Addresses**

Using the Web server functions built into the VB101, IP addresses can be expressed as <_I_P_A_D_D_R_> (all upper-case characters, including the angle brackets) in the three file types used by the Web server in the VB101.

When only Ethernet is used, IP addresses can be specified directly. However, when Ethernet and modems are used together, IP addresses must always be written using the <_I_P_A_D_D_R_> convention.

If the address is specified in this way, it can be converted correctly and sent as a file to the respective client regardless of whether the system was accessed from an Ethernet network or via PPP (modem).

This function is valid when the VB101 is used jointly as both Web server and camera server and cannot be used to specify IP addresses for other VB101s.

Note

The <_I_P_A_D_D_R_> convention may not be used through firewalls.

1

sample.htm

```
<html>
<head>
<title>SampleSite LiveApplet</title>
</head>
<frameset rows="70,*">
<frame src="header.htm">
<frame src="lvappl.htm">
</frameset>
</html>
```

2

header.htm

```
<html>
<head>
<title>LiveApplet comment</title>
</head>
<body>
<center><h1>LiveApplet</h1></center>
</body>
</html>
```

3

lvappl.htm

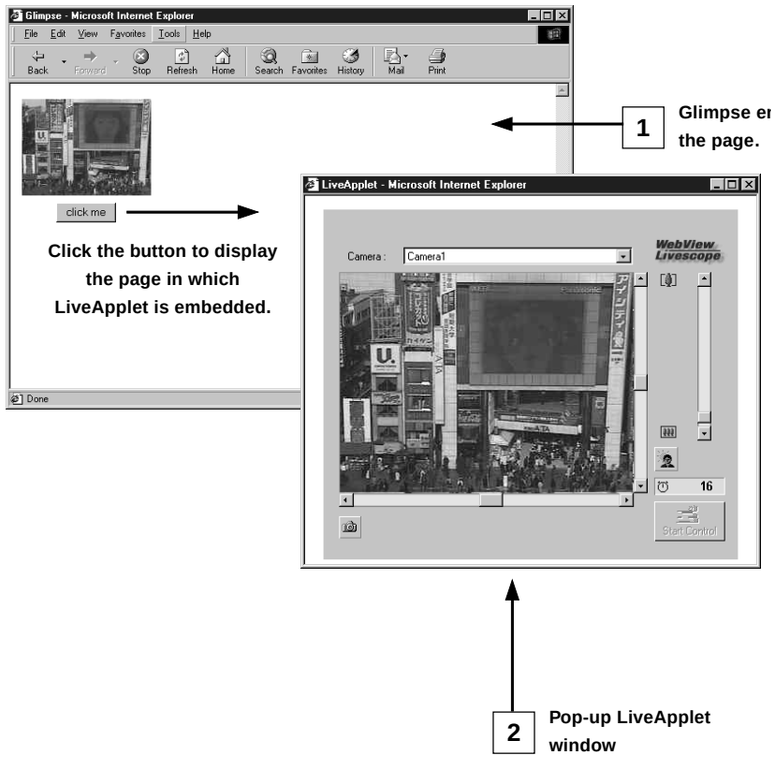
```
<html>
<meta http-equiv="Content-type" content="text/html;charset=iso-8859-1">
<head>
<title>LiveApplet</title>
</head>
<body>
<applet codebase="http://192.168.100.1*/-wvdoc-01-/LiveApplet/"
    code="LiveApplet.class" archive="LiveApplet.zip"
    width=450 height=380>
<param name=cabbase value="LiveApplet.cab">
<param name=url value="http://192.168.100.1*/">
</applet>
</body>
</html>
```

* The underlined portion is a sample IP address. Enter the actual IP address of the camera server.

Using a Java Viewer to Transmit Video Images

Using Glimpse and LiveApplet Together

This section describes how to create a Web page that allows users to use Glimpse to download quickly and view live video at a low frame rate, and then use LiveApplet to view video at a high frame rate and control the camera when they find images they are particularly interested in.



1 **Glimpse embedded in the page.**

Click the button to display the page in which LiveApplet is embedded.

2 **Pop-up LiveApplet window**

1

glimps.htm

```
<html>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<head>
<script language="JavaScript">
<!--
function clicked(btn) {
        url = btn.name
        window.open(url,"LiveApplet","width=490,height=400")
}
// -->
</script>
<title>Glimpse</title>
</head>
<body>
<table>
<form name="form">
<tr><td><center>
<applet codebase="http://192.168.100.1*/-wvdoc-01-/Glimpse/"
        code="Glimpse.class" archive="Glimpse.zip"
        width=160 height=120>
<param name=cabbase value="Glimpse.cab">
<param name=url value="http://192.168.100.1*/">
</applet>
</center></td></tr>
<tr><td><center>
<input type="Button" name="popup.htm" value="click me"
 onClick="clicked(this)">
</center></td></tr>
</form>
</table>
</body>
</html>
```

2

popup.htm

```
<html>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<head>
<title>LiveApplet</title>
</head>
<body>
<center>
<applet codebase="http://192.168.100.1*/-wvdoc-01-/LiveApplet/"
        code="LiveApplet.class" archive="LiveApplet.zip"
        width=450 height=380>
<param name=cabbase          value="LiveApplet.cab">
<param name=url              value="http://192.168.100.1*/">
</applet>
</center>
</body>
</html>
```

* The underlined portion is a sample IP address. Enter the actual IP address of the camera server.

Providing "LiveApplet" without Camera Control

This section describes how to create a Web page that only displays live video and has no camera control GUI for situations where you want to prohibit camera control.

<applet ... omitted ... width=320 height=240>
<param name=video_width value="320">
<param name=controllable value="false"> ..... ①

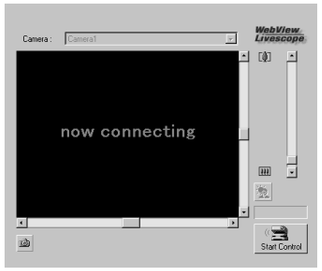
① specifies whether of not a user interface for camera control is displayed.
"true": Displayed.
"false": Not displayed.

Modifying the Startup and Disconnection Screens

You can modify the image files (JPEG or GIF image files) shown in the startup and disconnection screens.

Nothing Selected

■Startup screen

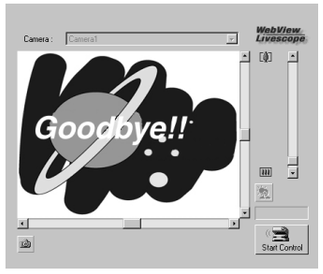


■Disconnection screen

Certain Images Selected

■Startup screen

■Disconnection screen



If no particular image is specified, the "connecting to hostname" (when the hostname parameter is specified) or "now connecting" animation is displayed at startup and the "disconnected hostname" (when the hostname parameter is specified) or "disconnected" is displayed at disconnection.
You can modify the screens to show any image by providing images for the startup and disconnection screens and setting the parameters. The image size is automatically adjusted to the size specified in the video_width parameter. The display time for the specified screen at startup can also be specified.

<param name=open_image value="/opt/images/opening.jpg"> ..... ①
<param name=open_image_time value="3000"> ..... ②
<param name=close_image value="/opt/images/closing.jpg"> ..... ③

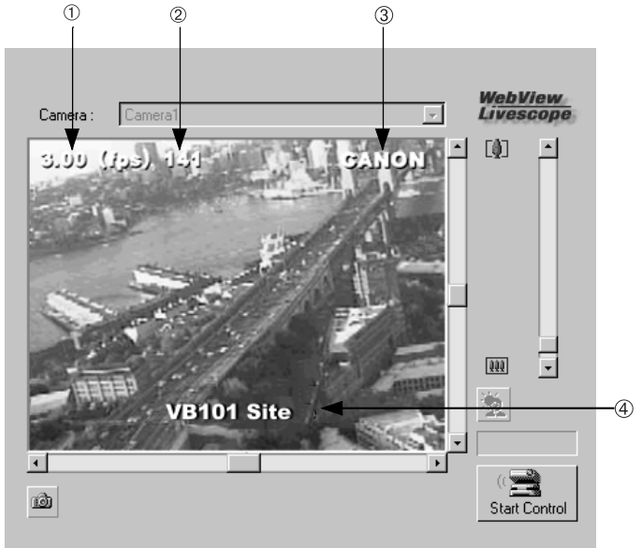
① specifies the file name for the startup image screen.
② specifies the display time for the startup image screen (in milliseconds).
③ specifies the file name for the disconnection image screen.

Note

You must use the path name (name that begins with "/") to specify the URL for the image file displayed.
(→ See step 3 on P.25.)

Using a Java Viewer to Transmit Video Images

Displaying the Host Name, Frame Count and Other Information on the Video Screen




```
<param name=show_fps value="on">                          ①
<param name=show_counter value="on">                      ②
<param name=hostname value="CANON">                       ③
<param name=show_hostname value="on">                     ③
<param name=comment value="VB101 site">                   ④
<param name=show_comment value="on">                      ④
```

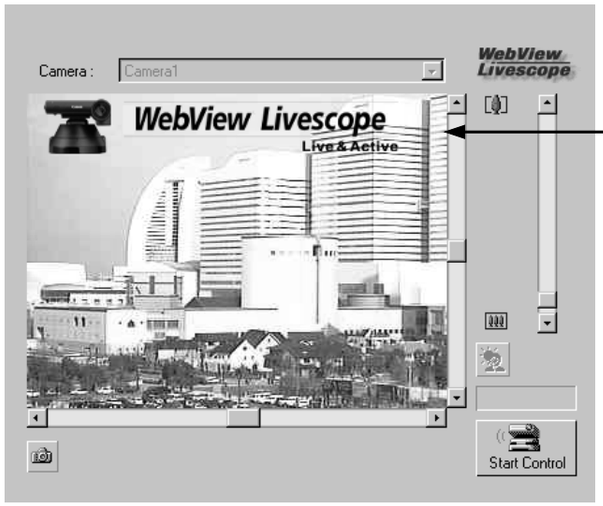
① specifies whether the frame rate is displayed on the screen.
"on": Displayed.
"off": Not displayed.

② specifies whether the frame count is displayed on the screen.
"on": Displayed.
"off": Not displayed.

③ specifies the host name (any text string) to be displayed on the screen and whether the host name is displayed.
"on": Displayed.
"off": Not displayed.

④ specifies a comment to be displayed on the screen and whether the comment is displayed.
"on": Displayed.
"off": Not displayed.

Displaying Bitmap Images on the Video Screen




```
<param name=superimpose value="/logos/newlogo.gif,x,y*">
```

* "x,y" specifies the display position. When x,y = 0,0, the image is displayed in the top left corner. If "x,y" is omitted, the image is displayed in the center of the frame.

Specifying the Background Color

```
<html>
<body bgcolor=#cccccc>
<applet codebase=http://...code="LiveApplet.class" width=450 height=380>
<param name=url value="http://192.168.100.1*">
    <param name=bg_color value="#cccccc">
</applet>
</body>
</html>
```

* The underlined portion is a sample IP address. Enter the actual IP address of the camera server.

Using a Java Viewer to Transmit Video Images

Java Viewer Parameters

You can specify applet parameters to provide an applet tailored to modify the behaviour or appearance of applets. Refer to the table below to ensure that you thoroughly understand the parameters.

■LiveApplet

Parameter Name	Omissable	Description
bg_color	Yes	Use this parameter to set the background color. The parameter specification format is "#RRGGBB" (values between 0 and 255 for each component color expressed as a hexadecimal). Eg. White: "#FFFFFF", Grey: "#AAAAAA", Green: "#00FF00" If this parameter is omitted, the default background color is used.
close_image	Yes	You can use this parameter to specify the screen displayed in the video display window at the time of disconnection. Specify the name of a JPEG or GIF file. If this parameter is omitted, the default disconnection screen is displayed.
comment	Yes	This parameter specifies the comment text string displayed as an overlay on the applet (alphanumeric characters only). If this parameter is omitted, no comment is displayed.
controllable	Yes	Specifying "false" in this parameter displays a GUI with no camera control functions. Specify "true" or "false". The default value is "true".
hostname	Yes	This parameter specifies the host name displayed in the applet (alphanumeric characters only). This value is used as the host name in messages displayed during connection, etc. If this parameter is omitted, no host name is displayed.
locale	Yes	Selects English or Japanese as the language used to display error messages and camera preset names. Specify "japanese" or "english". The default setting is "japanese". However, if "japanese" is specified when the browser or operating system does not support Japanese text display, English is used.
open_image	Yes	You can use this parameter to specify the screen that appears in the video display window until the first video image appears. Specify the name of a JPEG or GIF file. If this parameter is omitted, the default startup screen is displayed.
open_image_time	Yes	When a startup screen is specified in the "open_image" parameter, this parameter specifies the display time. The time is specified in milliseconds (1/1000 sec.), and the default value is 0. When the value is 0, the image is displayed until the first video frame appears. Values from 0 to 30000 (30 seconds) can be specified.
show_capture	Yes	This function specifies whether the Snapshot button is displayed. Specify "on" or "off". The default value is "on". The button is always displayed unless "off" is explicitly specified.
show_comment	Yes	This function specifies displays the comment as an overlay on the video image. Specify "on" or "off". The default value is "off".
show_counter	Yes	This function displays the frame count as an overlay on the video image. Specify "on" or "off". The default value is "off".
show_fps	Yes	This function displays the frame rate as an overlay on the video image. Specify "on" or "off". The default value is "off".
show_hostname	Yes	This function displays the host name as an overlay on the video image. Specify "on" or "off". The default value is "off". Note that this parameter is only valid if the "hostname" parameter is specified.
show_panobutton	Yes	Specify whether or not to display the panorama window pop-up button. The button will be displayed only when "on" is specified explicitly.
superimpose	Yes	This function displays a bitmap image as an overlay on the video image. Specify the image using the "bitmap-filename,x,y" format. Use the GIF format for bitmap images (transparent GIFs supported). The "x,y" parameters specify the coordinates of the bitmap image position on the video frame. If "x,y" is omitted, the image is displayed in the center of the video frame.
url	No	Specify the URL of the HTTP server for applet access. Specify the IP address and port number that match those specified in the codebase attribute.
video_width	Yes	This parameter specifies the video image display size (in pixels). Specify the width. The display sizes are 80 to 640, and any value can be set as the width. The height is calculated as 3/4 of the specified width. Eg. video_width="240" (height = 240 x 3/4 = 180.)

■Glimpse

Parameter Name	Omissable	Description
comment	Yes	This parameter specifies the comment text string displayed as an overlay on the applet (alphanumeric character only). If this parameter is omitted, no comment is displayed.
hostname	Yes	This parameter specifies the host name displayed in the applet (alphanumeric character only). This value is used as the host name in messages displayed during connection, etc. If this parameter is omitted, no host name is displayed.
show_counter	Yes	This function displays the frame count as an overlay on the video image. Specify "on" or "off". The default value is "off".
show_hostname	Yes	This function displays the host name as an overlay on the video image. Specify "on" or "off". The default value is "off". Note that this parameter is only valid if the "hostname" parameter is specified.
sleep	Yes	This parameter specifies the interval (in milliseconds) at which the screen is updated. If this parameter is omitted, the screen is updated at 5-second intervals. Because the Glimpse applet is designed to be used for displaying multiple sites as a list, this parameter is provided as a means of reducing the processing load. Intervals between 0 and 300,000 ms (5 minutes) can be set. If 0 is specified, the interval is not adjusted.
url	No	Specify the URL of the HTTP server for applet access. Specify the IP address and port number that match those specified in the codebase attribute.

■Applet Tag Descriptions

Parameter Name	Omissable	Description
code	No	This parameter specifies the applet file name. Enter "LiveApplet.class" or "Glimpse.class". If this parameter is not specified correctly, the applet (LiveApplet or Glimpse) is not downloaded.
codebase	No	This parameter specifies the directory that contains the applet. http://HTTP server IP address: port number/directory/ If this parameter is not specified correctly, the applet (LiveApplet or Glimpse) is not downloaded. Directories are fixed for each applet. Directory (LiveApplet)=-wvdoc-01-/LiveApplet Directory (Glimpse)=-wvdoc-01-/Glimpse
width	No	This parameter specifies the size of the area acquired for the applet (in pixels). For LiveApplet, if the value specified is smaller than the LiveApplet drawing area, the applet may not be displayed correctly. If the camera control function GUI is to be added (controllable=true), add about 130 to the value. Eg. For an image size of 320 x 240, width=450. For Glimpse, because the areas used for the applet and for the video display are the same size, specify the same value as the image width. Eg. For an image size of 320 x 240, width=320.
height	No	As for width. For LiveApplet, add around 140. Eg. For an image size of 320 x 240, height=380. For Glimpse, specify the same value as the image height. Eg. For an image size of 320 x 240, height=240.
archive	Yes	Specify LiveApplet.zip or Glimpse.zip to comply with the applet type.

Using the Helper Viewer to Transmit Video Images

This section describes how to use the Helper Viewer to provide video images. Application examples are also given.
If a client is using the Helper Viewer to transmit video images, the sender must set up the Web server and create the necessary wvh files.

> Tip
> **If the VB101 is used as the Web server, the settings described below are not required.**

Setting Up the Web Server

Set up the Web server to be used for saving the data transmission Web page. Add the MIME type to the Web server software and specify the extension. Refer to the manual for your Web server software for details.

MIME type	video/x-webview-h
Extension	wvh

For Apache

In the settings for added the MIME type in Apache,
edit the "mime.types" file in the "conf" directory.
■Use the following syntax to add the required MIME type to the computer:

type/subtype extention

■The settings for WebView Livescope are as follows:

video/x-webview-h wvh (Helper settings)

> Note
> **If the MIME setting is not specified correctly for the Web server, you may not be able to launch the helper viewer. Be sure to specify the setting.**

Creating wvh files

This section describes how to create the wvh file required for launching the Helper Viewer application.

1 Use a text editor or similar program to create a new text file and type the following type of code in the file:

(Example) 192.168.100.1 65310
192.168.100.1 65311
wvhttp:192.168.100.1 80

- The first line gives the IP address (or host name) of the camera server and the TCP port number used for the image transmission service.
  For WebView Livescope, the default setting is 65310. The default setting will be used if no particular value is specified.
- The second line gives the IP address (or host name) of the camera server and the TCP port number used for the camera control service. For WebView Livescope, the default setting is 65310. The default setting will be used if no particular value is specified.
- The third line gives the setting for the Helper Viewer to use HTTP protocol. After "wvhttp:", type in the IP address of the camera server and "80" as the HTTP port number. As a result of this, you will be able to view images from the camera server through firewalls.

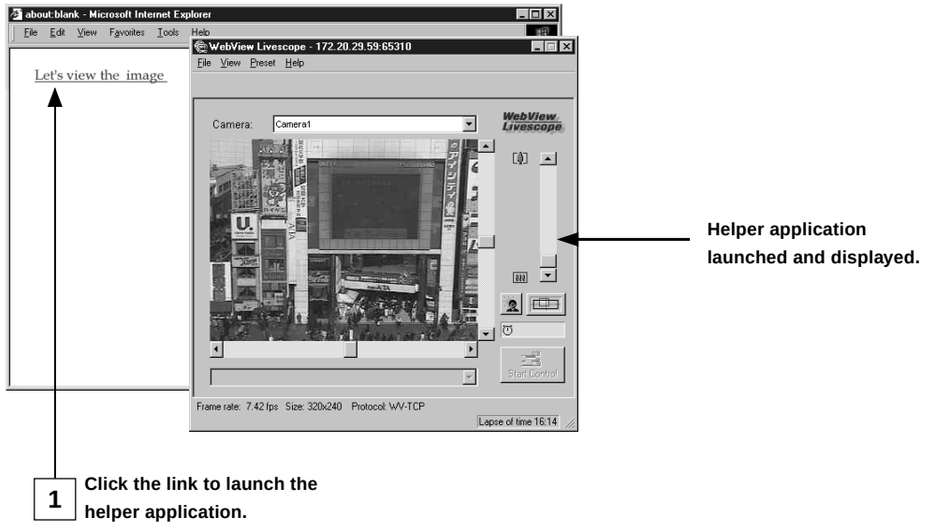
*** Type in the actual IP address (or host name) of the camera server.**

2 After you save the text file and quit the text editor program, create a wvh file by changing the file name and extension. Be sure to add the ".wvh" extension, as in "Webview.wvh". File names can contain up to 8 characters. (eg. WebView)

> Tip
> **Helper Viewer supports WebView Livescope protocol and HTTP protocol.**
> - **WebView Livescope protocol: Cannot be viewed through firewalls. This protocol is primarily for clients who are connected directly to the Internet.**
> - **HTTP protocol: In general, this protocol is used with Web browsers. Images from clients inside firewalls can also be viewed by using this protocol.**

Example of a Web page Using the Helper Viewer

This section describes an sample web page in which the Helper Viewer is used.


about:blank - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Let's view the image
WebView Livescope - 172.20.29.59:65310
File View Preset Help
Camera: Camera1
WebView Livescope
Start Control
Frame rate: 7.42 fps Size: 320x240 Protocol: WV-TCP
Lapse of time 16:14

Helper application launched and displayed.

1 **Click the link to launch the helper application.**

Include the tags that link to the wvh file in the text or images in the Web page.

1 **<A HREF="WebView.wvh">Let's view the image</A>**

> **Tip** **To use the sample page template in the VB101 to supply video images, specify <A HREF=http://VB101-IP-address/sample/helper/default.wvh>.**

Transmitting Video Images Using a Browser Only

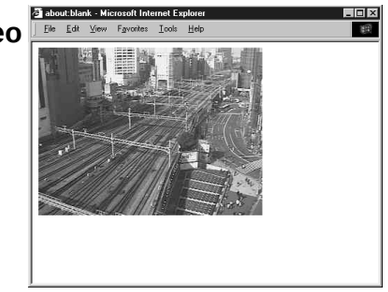
You can also use the WebView-HTTP protocol to provide images from the camera directly to a Web browser. Some example of this are described in this section.

Displaying the Live Video Image at Access as a Still Image

When a client accesses the Web page that provides video images, the video image shot at that point can be supplied as a still image.

<IMG SRC=http://192.168.100.1*/-wvhttp-01-/GetStillImage>
(or)
<IMG SRC=http://192.168.100.1*/-wvhttp-01-/GetOneShot>

Displaying a Specified Number Of Live Video Frames As a Movie at Access



The Server Push format provided as an extended function by Netscape Communications Corp. can be used to transmit multiple-frame images. However, these images can only be displayed on Netscape Navigator. In the coding example below, 100 frames of live video are transmitted when the client accesses the server.

<IMG SRC=http://192.168.100.1*/-wvhttp-01-/GetOneShot?frame_count=100>

> **Tip** **Setting frame_count=no_limit, removes the limits on the number of image frames.**

Displaying Live Video from a Specified Angle as Still Images

By specifying the camera angle as a parameter in the HTML code beforehand, you can display the image from a specified camera angle. The example below displays a still image shot with the camera panned right by 40° and tilted down 10°.

<IMG SRC=http://192.168.100.1*/-wvhttp-01-/GetStillImage?p=40&t=-10>

* The underscored portion is a sample IP address. Enter the actual camera server IP address.

■GetStillImage Parameters

Parameter	Description
p/pan	Specifies the camera pan angle. p is a 1°unit, and pan is a 0.01°unit. For example if the camera pans right 20°, then p is 20 and pan is 2000. If this parameter is omitted, the camera pan angle is not controlled.
t/tilt	Specifies the camera tilt angle. t is a 1°unit, and tilt is a 0.01°unit. If this parameter is omitted, the camera tilt angle is not controlled.
z/zoom	Specifies camera zoom. z is ten times the zoom ratio of the widest angle, and zoom is the view angle in 0.01°units (horizontal direction. If this parameter is omitted, camera zoom is not controlled.
b/back_light	Specifies camera backlight compensation. When this parameter is set to on, the image captured will be bright and when this parameter is set to off, the image captured will be dark. If this parameter is omitted, camera backlight compensation is not controlled.
camera_id	Assigns the numbers 1 to 4 to camera 1 to 4. If this parameter is omitted, the camera that is currently selected will be used.
delay	Waiting time until camera focus is stabilized (in milliseconds). Specified in the range 0 to 10000.
option	Specifies how errors are dealt with. When skip_on_error is specified, the process will be continued. When quit_on_error is specified, the process will be aborted. The following errors can occur: failure to acquire camera control right, loss of camera control, camera selection errors and camera control errors. To omit, the default value is quit_on_error.
seq	Allows any number to be specified to avoid displaying old images (numeric value).

Note **If old images are displayed, you can prevent this recurring by specifying a sequence number in the seq parameter.**

Chapter 5

Using the Picture Recording Function

This chapter describes a couple of specific examples of the Picture Recording function using the VB101. This function can be used to automatically capture still pictures according to a preset schedule or in response to inputs from an external device, and then display those pictures on a Web page

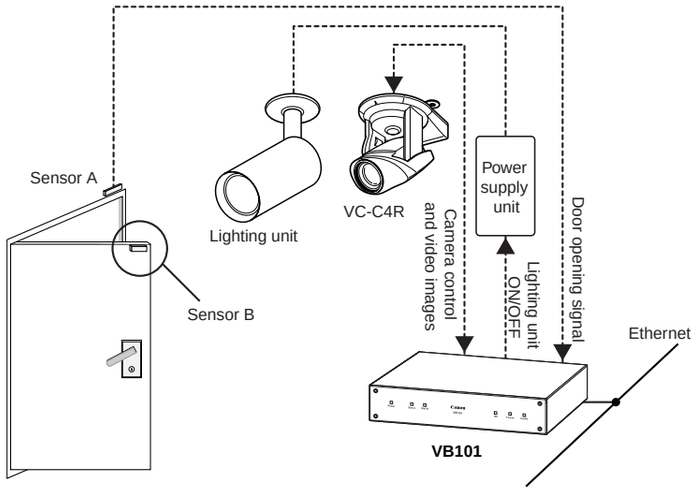
Using the Still Picture Recording Function Linked to an External Device

By using the "External Device Input 1/2" setting and connecting devices such as sensors and switches to the VB101, you can construct a monitoring system that operates in response to external changes. The still images captured in this way are recorded on a memory card inserted into the VB101.

Sample application in combination with a door-opening sensor and lighting unit

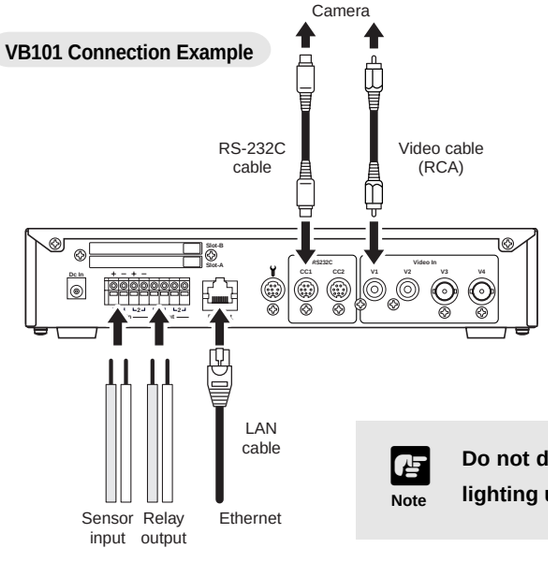
This is a monitoring system in which the lighting unit needed to take pictures switches on when the door opens and the VC-C4R camera mounted on the ceiling captures still images. The equipment shown in the figure below is connected to the terminals on the back of the VB101 at installation.

Installation Example



When the door opens and Sensor B moves away from sensor A, connection input In1 generates an ON event. In response to this event, Out1 is controlled to switch on the lighting unit and images of the entrance are captured and recorded by the camera.

VB101 Connection Example



Connector	Attached Cable
In1	Sensors mounted on the door
Out1	Lighting unit via the power supply unit
V1	Video cable for the VC-C4R camera
CC1	Control cable for the VC-C4R camera

Note **Do not directly connect the power cord for the lighting unit to OUT1 or OUT2.**

Sample Settings

Photography settings specified on the "Camera and Video" page (→ P.40)

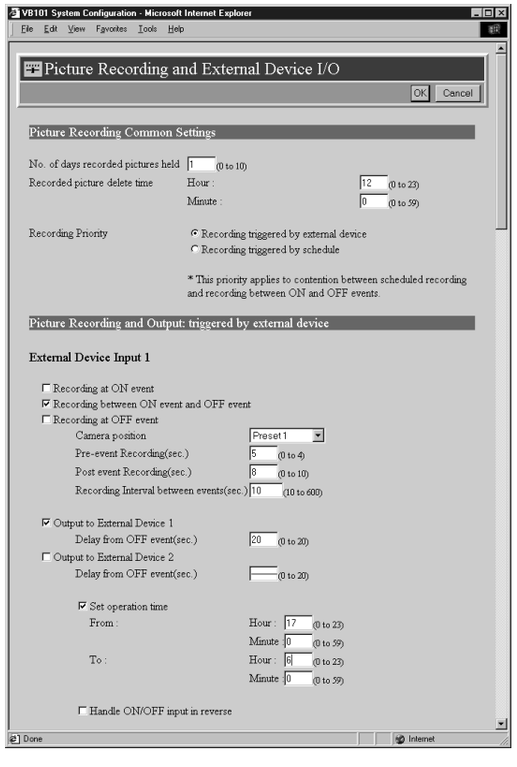
Specify the appropriate settings for the camera 1 being used.

Photography settings specified on the "Preset" page (→ P.44)

Set a camera angle that shoots the open doorway as preset 1.

Photography settings specified in "External Device Input 1/2" (→ P.45)

- Set the photography operation time from 17:00 to 6:00.
- Give priority to "Recording triggered by external device".
- Set the camera position for shooting to preset 1.
- Set the light to switch on when the door opens and to switch off 20 seconds after the door closes.
- Begin recording pictures 4 seconds before the door opens. The light is not switched on at that point.
- Continue to record pictures for 8 seconds after the door closes.
- Record pictures at 10-second intervals while the door is open.
- Delete the recorded pictures at 12:00 on the next day. In this case, delete the pictures recorded in the morning at 12:00 on the next day, and delete the pictures recorded in the afternoon at 12:00 two days later.


VB101 System Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Picture Recording and External Device I/O
OK Cancel
Picture Recording Common Settings
No. of days recorded pictures held 1 (0 to 10)
Recorded picture delete time Hour : 12 (0 to 23)
Minute : 0 (0 to 59)
Recording Priority
Recording triggered by external device
Recording triggered by schedule
* This priority applies to contention between scheduled recording and recording between ON and OFF events.
Picture Recording and Output: triggered by external device
External Device Input 1
Recording at ON event
Recording between ON event and OFF event
Recording at OFF event
Camera position Preset 1
Pre-event Recording(sec.) 5 (0 to 4)
Post event Recording(sec.) 8 (0 to 10)
Recording Interval between events(sec.) 10 (10 to 600)
Output to External Device 1
Delay from OFF event(sec.) 20 (0 to 20)
Output to External Device 2
Delay from OFF event(sec.) (0 to 20)
Set operation time
From : Hour : 17 (0 to 23)
Minute : 0 (0 to 59)
To : Hour : 6 (0 to 23)
Minute : 0 (0 to 59)
Handle ON/OFF input in reverse
Done
Internet

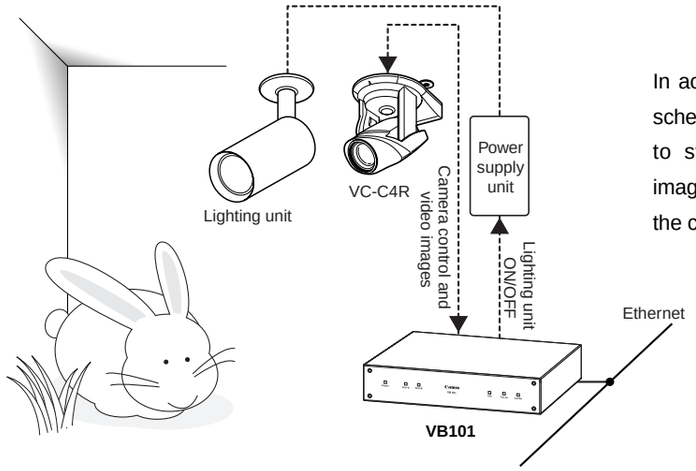
Using the Still Picture Recording Function with a Predetermined Schedule

By using the "Schedule 1-/4" setting, you can construct a monitoring system that records pictures according to a predetermined schedule. The still images captured in this way are recorded on a memory card inserted into the VB101.

Sample application in combination with a lighting unit

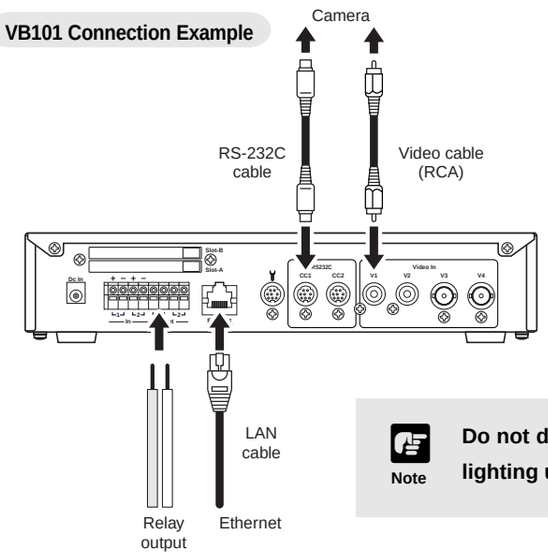
This is a monitoring system of the type used in zoos and similar facilities in which the animals are monitored during the hours they are unattended. The light switches on and still images are captured at 15-minute intervals by a VC-C4R camera mounted on the ceiling. The equipment shown in the figure below is connected to the terminals on the back of the VB101 at installation.

Installation Example



In accordance with the predetermined schedule, Out1 is controlled from Out1 to switch on the lighting unit and images are captured and recorded by the camera.

VB101 Connection Example



Connector	Attached Cable
Out1	Lighting unit via the power supply unit
V1	Video cable for the VC-C4R camera
CC1	Control cable for the VC-C4R camera

Note **Do not directly connect the power cord for the lighting unit to OUT1 or OUT2.**

Sample Settings

Photography settings specified on the "Camera and Video" page (→ P.40)

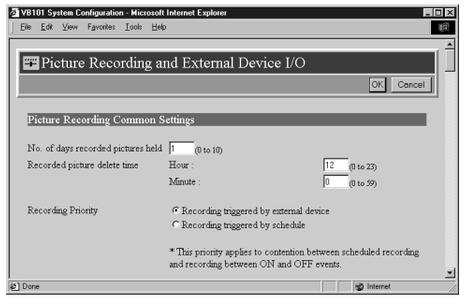
Specify the appropriate settings for the camera 1 being used.

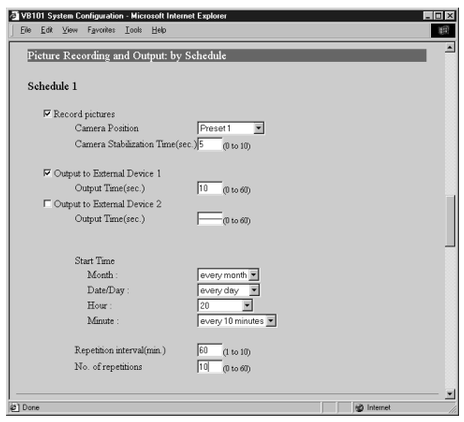
Photography settings specified on the "Preset" page (→ P.44)

Set a camera angle that shoots the animal cage as preset 1.

Photography settings specified in "Schedule 1-4" (→ P.45)

- If you are not using photography triggered from an external device, leave the default priority ("Recording triggered by external device") unchanged.
- Set the camera position for shooting to preset 1.
- Insert a 5-second delay before shooting to allow the camera to stabilize in the shooting position.
- Set the light to switch on when shooting begins and to switch off 10 seconds later.
- Set the photograph operation time from 20:00 to 6:00. Because this is performed daily, set the start time for 20:00 every day of every month.
- Set a repeating interval for shooting of 10 minutes. Set the repeating number of times to 60 (6 times/hour x 10 hours).
- Delete the recorded pictures at 12:00 on the next day. In this case, delete the pictures recorded in the morning at 12:00 on the next day, and delete the pictures recorded in the afternoon at 12:00 two days later.

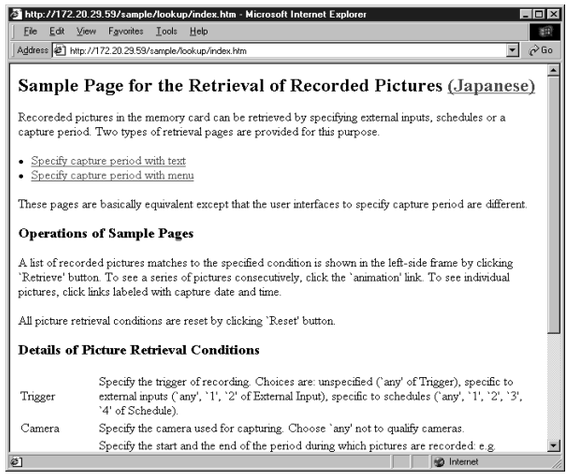

VB101 System Configuration - Microsoft Internet Explorer
Picture Recording and External Device I/O
OK
Cancel
Picture Recording Common Settings
No. of days recorded pictures held 1 (0 to 10)
Recorded picture delete time Hour : 12 (0 to 23)
Minute : 0 (0 to 59)
Recording Priority
Recording triggered by external device
Recording triggered by schedule
* This priority applies to contention between scheduled recording and recording between ON and OFF events.


VB101 System Configuration - Microsoft Internet Explorer
Picture Recording and Output: by Schedule
Schedule 1
Record pictures
Camera Position Preset 1
Camera Stabilization Time(sec.) 5 (0 to 10)
Output to External Device 1
Output Time(sec.) 10 (0 to 60)
Output to External Device 2
Output Time(sec.) (0 to 60)
Start Time
Month : every month
Date/Day : every day
Hour : 20
Minute : every 10 minutes
Repetition interval(min.) 60 (1 to 10)
No. of repetitions 10 (0 to 60)

Viewing and Transmitting Recorded Pictures

You can search and view recorded pictures by accessing the Picture Retrieval page. You can search by trigger, by camera or by time interval from your browser and view pictures as images or as a pseudo-animation. You can also transmit stored images directly to users so that they can search and view the images in the same way.

Viewing Recorded Pictures

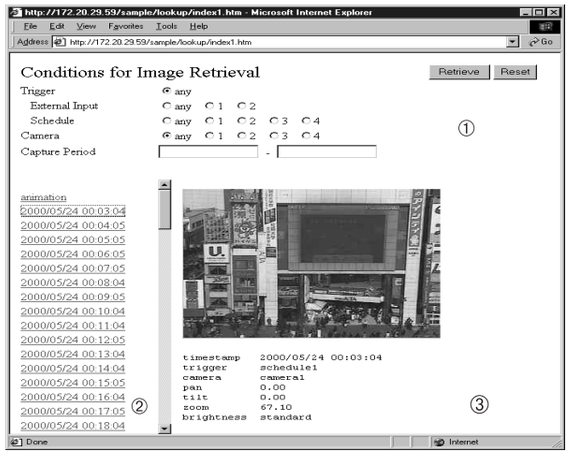

http://172.20.29.59/sample/lookup/index.htm - Microsoft Internet Explorer
Sample Page for the Retrieval of Recorded Pictures (Japanese)
Recoreded pictures in the memory card can be retrieved by specifying external inputs, schedules or a capture period. Two types of retrieval pages are provided for this purpose.
Specify capture period with text
Specify capture period with menu
These pages are basically equivalent except that the user interfaces to specify capture period are different.
Operations of Sample Pages
A list of recorded pictures matches to the specified condition is shown in the left-side frame by clicking 'Retrieve' button. To see a series of pictures consecutively, click the 'animation' link. To see individual pictures, click links labeled with capture date and time.
All picture retrieval conditions are reset by clicking 'Reset' button.
Details of Picture Retrieval Conditions
Trigger
Specify the trigger of recording. Choices are: unspecified ('any' of Trigger), specific to external inputs ('any', '1', '2' of External Input), specific to schedules ('any', '1', '2', '3', '4' of Schedule).
Camera
Specify the camera used for capturing. Choose 'any' not to qualify cameras.
Specify the start and the end of the period during which pictures are recorded: e.g.

Use your Web browser to access the following URL:

http://192.168.100.1/sample/lookup/

* Enter the IP address of the actual camera server.

The "Sample Page for the Retrieval of Recorded Pictures" shown at left appears. Click the "Specify capture period with text" link if you want to enter numbers to specify the shooting period to be searched, or click the "Specify capture period with menu" link to select the shooting period from a menu.

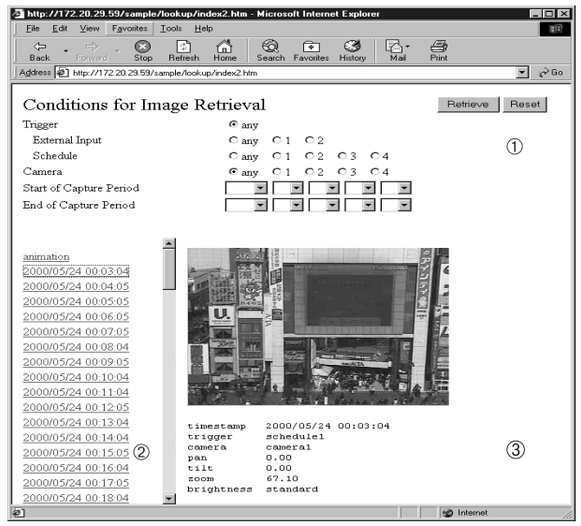


When you select "Specify capture period with text", the search condition specification screen appears in window ① at left.

- Select either connection input or schedule as the "Trigger". Connection input 1 and 2 correspond to the "External Device Input 1/2" parameter on P.46, and schedule 1-4 corresponds to the "Schedule 1-4" parameter on P.43. Use the "any" option to search all the options for the respective parameter.
- In "Camera", specify the camera number to be searched. Select "any" to search all the cameras.
- In "Period", enter the date and time the images were captured.

Example 1/200004191830-20000420010530
Searches from 18:30:00 on April 19, 2000 to 01:05:30 on April 20, 2000.
Example 2/20000419-[blank]
Searches from 00:00:00 on April 19, 2000 to the present.
Example 3/[blank]-20000420
Searches from the oldest recorded pictures to 23:59:59 on April 20, 2000.

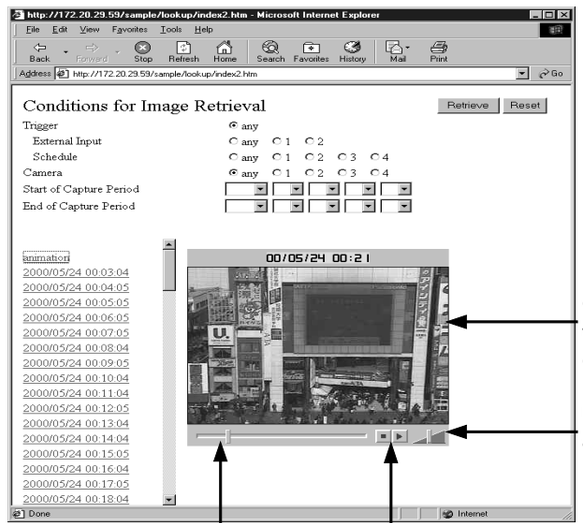
When you specify the search condition and click the [Retrieve] button, a list of the shooting dates and times that meet those conditions appears in window ②. When you click on one of the listed items, the corresponding image and photography settings appear in window ③.



If you select "Specify capture period with menu", the search criteria specification screen appears in window ① at left.

- Select either connection input or schedule as the "Trigger". Connection input 1 and 2 correspond to the "External Device Input 1/2" parameter on P.46, and schedule 1-4 corresponds to the "Schedule 1-4" parameter on P.48. Use the "any" option to search all the options for the respective parameter.
- In "Camera", specify the camera number to be searched. Select "any" to search all the cameras.
- In "Period", enter the date and time the images were captured.

When you specify the search condition and click the [Retrieve] button, a list of the shooting dates and times that meet those conditions appears in window ②. When you click on one of the listed items, the corresponding image and photography settings appear in window ③.



By clicking "Animation" in the list display, you can view all the retrieved images in the list continuously as a pseudo-animation.

Tip **Customize the search criteria specification page before using the Search function.**

Pictures Search CGI

The pictures search CGI includes the enum command to generate a list of recorded pictures that satisfy the search criteria, the desc command to generate the video data display page, and the data command to retrieve the video data.

enum Command

The enum command is used to generate a list display page for the search page and to generate a page for SnapAnimator. The items displayed in the recorded picture list generated by the enum command are displayed in order of the time they were collected.

■enum Command Parameters

Parameter Name	Details
type	List format. Specify "html" to specify a list display page, or "anim" to specify a page for SnapAnimator.
server	Specifies the HTTP server. If this parameter is omitted, the IP address of the client side network interface is used*1. Specify the IP address of the HTTP server.
target	Target frame name for list display. Mandatory when a multi-frame configuration is used to construct the picture search page.
locale	Language used to display the desc command attribute information. Specify "english" for English-language display and "japanese" for Japanese-language display. The default value is "english". When an undefined value is specified, the default value is used.
skip/limit	Specifies the range for the search results. Specify an integer of 0 or more for either. Of the list of recorded pictures that satisfy the search criteria, the list displayed excludes the number of items specified by the skip parameter from the beginning of the list and includes items up to the limit imposed by the limit parameter. If these parameters are omitted or erroneous values are specified, skip is set to 0 and limit to 100. If limit is set to 0, no limit is applied.
tn	Specifies the trigger that governs the main cause of picture recording. A setting of i0 restricts any connection input, and i1 and i2 restrict connection input to inputs 1 and 2. A setting of s0 restricts any schedule setting, and s1, s2, s3 and s4 restrict schedule setting to settings 1,2,3, and 4. If this parameter is omitted, or an undefined value is specified, the trigger is unrestricted.
cn	Camera number use for shooting. Specify a value from 1 to 4 as the camera number. If this parameter is omitted or an undefined value is specified, the camera number is unrestricted.
ts	Start time for the shooting period. Specify a setting using the "yyyymmddHHMMSS" format (yyyy: year; mm: month; dd: day; HH: hour; MM: minute; SS: second). If this parameter is omitted or an erroneous value is specified, the start time for the recording period is unrestricted. The mmddHHMMSS parameter and HHMMSS parameter can be omitted. The default settings are 01 for mm and dd, and 00 for HH, MM and SS.
te	End time for the shooting period. The specification format and the handling of omitted or erroneous parameters is the same as for ts. The mmddHHMMSS parameter and HHMMSS parameter can be omitted. The default settings are 12 for mm, 31 for dd, 23 for HH, and 59 for MM and SS.

*1 This is a function that corresponds to address replacement using <_I_P_A_D_D_R_>. However, you cannot specify <_I_P_A_D_D_R_> itself.

desc Command

The desc command is used to generate a video display page. The video display page uses HTML text for the video display area and attribute display area, and uses the data command described below to retrieve the video data.

■desc Command Parameters

Parameter Name	Details
b	Specifies the video data. this is the video data file name excluding the ".jpg" extension and is specified using the "yyyymmdd/HHMMSSCC" format. This parameter can not be omitted.
server	Specifies the HTTP server. If this parameter is omitted, the IP address of the client side network interface is used*1. Specify the IP address of the HTTP server.
locale	Language used to display the desc command attribute information. Specify "english" for English-language display and "japanese" for Japanese-language display. The default value is "english". When an undefined value is specified, the default value is used.

data Command

The data command retrieves video data. The parameters only specify the video data and the format is the same as the b parameter for the desc command. Specify the data directly as "data?yyymmdd/HHMMSSCC" with no parameter name.

Transmitting Recorded Pictures

Transmitting pictures that have been recorded

If you forward a picture (JPEG) recorded with the Schedule recording function and copy it, or remove the card, download the picture to a PC and embed the picture in a HP, you can create a still-image transmission page.

Transmitting pictures in SnapAnimator display format

Pseudo-animations (→ P.85) are created using the SnapAnimator applet. The following example is a SnapAnimator description in a HTML source. Customize the description between <APPLET> and </APPLET> to enter the picture in the place you want to paste it.

```
<APPLET CODEBASE="http://192.168.100.1*/-wvdoc-01-/SnapAnimator/"
code="SnapAnimator.class"
    archive="SnapAnimator.zip" width=320 height=300>
<PARAM NAME=cabbase VALUE="SnapAnimator.cab">
<PARAM NAME=image0 VALUE="http://192.168.100.1*/-vbidb-/data?20000102/
03040507">
<PARAM NAME=time0 VALUE="2000/01/02 03:04:05">
<PARAM NAME=image1 VALUE="http://192.168.100.1*/-vbidb-/data?20000216/
10100713">
<PARAM NAME=time1 VALUE="2000/02/16 10:10:07">
<PARAM NAME=image1 VALUE="http://192.168.100.1*/-vbidb-/data?20000316/
01100815">
<PARAM NAME=time2 VALUE="2000/03/16 01:08:15">
 ...
</APPLET>
```

* The underlined text is an IP address. Enter the actual IP address of the Web server.

■SnapAnimator parameters

Parameter	Description
image0	Specifies the URL of the image file. When specifying multiple image files, specify them successively as image1, image2, etc.
time0	Specifies the time at which image0 was taken. Written in the "Y/M/D H:M" format.

The above example was generated using an emum command for the video search CGI. By using this description to properly specify the image0 and time0 parameters, you can also create an image transmission page that displays any still images (JPEG) you have on hand as pseudo-animations. In this case, enter the time stamp that corresponds with the name of the image file that you want to display in the shaded area and enter the imageX and timeX parameters only for the quantity of images which you want to display.

Chapter 6

Troubleshooting

This chapter explains how to deal with problems that arise with the operation of the VB101 and other faults.

Troubleshooting

Before you contact your Canon dealer or service outlet, check the items listed below. If a log message is displayed, refer to the log message list for the log details and the appropriate response.

The VB101 does not start up. The Power lamp does not light.

- Check that the AC cable is connected correctly.
- Switch the VB101 off and then on again (→ P.23).
- If the power lamp stays orange and does not change to green, this indicates that there is a system fault. Restore the factory default settings (→ P.106). If this does not resolve the problem, contact your Canon dealer.

The initial setup tools do not work.

- Check that the RS-232C cable used for setup is connected correctly.
- Check that you have selected the correct COM port.
- Check that there are no other active applications (terminal software, etc.) that are using the COM port.
- The baud rate for the initial setup tools is fixed at 9600. Check that the baud rate for the PC's COM port is 9600.

I cannot access the VB101 over the network.

- Check that the LAN cable is connected correctly.
- Check that the VB101 network settings are correct. In particular, check that the IP address, subnet mask and default gateway address settings are valid for the network you are using.
- If you have changed the IP address, the new IP address does not take effect until you reboot the VB101.
- If access authority for the VB101 is being used, check the settings (→ P.50).
- Check that the IP address or URL settings in the viewer software are correct.

The video does not appear.

- Check that the camera is switched on and that the video cable is connected correctly.
- Check that the viewer software is correctly installed.
- If the video quality is poor, check the quality settings on the VB101. Also, check settings such as the number of background colors as on the viewer PC.
- You can limit the number of viewers that can access the VB101 at the same time. This message is displayed without a video image when this limit is exceeded.
- If you cannot see the video using the Java Viewer, check system settings such as the browser version. Up-to-date information is provided on the VB101 website.
  (URL: http://www.x-zone.canon.co.jp/WebView-E/index.htm)

I can't control the camera.

- Checked that the RS-232C cable for camera control is connected correctly.
- Check that the VB101 control port for the corresponding camera is set correctly.
- Check that the VB101 camera control is not restricted.
- If you have changed the baud rate for the serial port on the camera, ensure that the camera control baud rate setting on the VB101 matches the camera settings (→ P.40).

I forgot the password.

- You will have to return the VB101 to a service center. Please contact your Canon dealer or Canon Sales Co., Inc.

I cannot record images or carry out an image search.

- Check that the memory card has been inserted properly.
- The maximum number of images that can be recorded is 1000. When the number of recorded images exceeds 1000, erase images that you do not need or replace the memory card.
- Check that the camera is on and the cable has been connected properly.
- A maximum of 32K bytes can be recorded for each image. Reduce the size of the image or lower the image quality.
- If there is an error in the search results, try to recover the index (/card/images/index.vbi). Click on the "Rebuild" button (Rebuilding the recorded picture list) on the Administration tools page to recover the index (→ P.56).

Note **If you have a problem, consult the ReadMe also. The ReadMe file may contain important information not included in this manual. Be sure to read this file.**

Log Messages

The Syslog log messages are classified into the following 5 categories. Classification details are dealt with in the UNIX syslog and the levels are explained in Chapter 3 (→P.54).

Classification	Level	Fault Severity
crit	Error	Critical fault at the software level (stops task operation)
err	Error	Fault involving a malfunction (operation interrupted)
warning	Warning	Fault not involving malfunction
notice	Warning	Fault outside the system
info	Information	Information on correct operation

* The syslog facility is local7.

Log Messages for Applications

●A002 Protocol initialization failure (err)

Message	%1 protocol not installed
%1	protocol type <LS/C|LS/D|LS/H|VW/C|VW/D|VW/E>
Explanation	Webview or VIEW-Windows initialization failed. The settings may be corrupted.
Response	Correct the settings or restore the factory default settings.

●A004 Fault in initial video input systems settings (warning)

Message	initial video input %1 marked inactive
%1	Camera number (1-4)
Explanation	Because there was no input for the initial video input system, VB101 has switched to automatic detection mode. The settings may be corrupted.
Response	Correct the settings or restore the factory default settings.

●A005 Camera control channel assignment error (warning)

Message	conflicting channel assignment for %1
%1	Camera control port (CC1|CC2)
Explanation	The same camera control port is assigned to multiple video input channels. The settings may be corrupted.
Response	Correct the settings or restore the factory default settings.

●A006 Camera control system initialization failure (err)

Message	cannot open camera control port %1
%1	Camera control port (CC1|CC2)
Explanation	The camera control port cannot be opened.
Response	If rebooting does not recover this problem, there is a malfunction. Contact an authorized Canon service representative.

●A007 View restriction setting error (warning)

Message	inconsistent view restriction for camera[%1]
%1	Camera number (1-4)
Explanation	The view restrictions settings are corrupted. The camera control functions on the affected camera cannot be used.
Response	Restore the factory default settings or reset the permitted field of view restrictions.

●A008 Compatibility error in the view restrictions settings (warning)

Message	unacceptable view restriction for camera[%1]
%1	Camera number (1-4)
Explanation	Even in the telephoto field of view, the view restriction settings cannot be satisfied in the horizontal or vertical direction. When this occurs, the zoom setting is fixed at the telephoto field of view, and camera head control is prohibited in directions that do not satisfy the permitted field of view restrictions.
Response	Set appropriate values for the permitted field of view restrictions.

●A010 Camera control driver start and stop (info)

Message	%1 driver for camera[%2] %3
%1	Camera type (Canon VC-C1|Canon VC-C3|Canon VC-C4|Canon VC-C4R)
%2	Camera number (1-4)
%3	started|stopped
Explanation	The camera control device was detected and the driver started up, or a camera control device error was detected and the driver stopped.

●A011 Camera control device error (warning)

Message	%1[%2] malfunction (%3)
%1	Camera type (VC-C1|VC-C3|VC-C4)
%2	Camera number (1-4)
%3	Error (read|write|timeout|...)
Explanation	Camera control device I/O error.
Response	If this occurs frequently, this is a malfunction. Contact an authorized Canon service representative.

●A014 Access prohibited due to host restriction (notice)

Message	%1@%2 access denied
%1	Client type (LS|VW)
%2	Client host IP address
Explanation	Access to the client was denied due to host restrictions . (LS indicates a WebView client, VW indicates a VIEW-Windows client. Normally, the same message is displayed several times.)

Log Messages

●A016 Amount of transmitted video data (info)

Message	%1@%2 %3 frames/%4 bytes in %5 seconds
%1	Client type (LS/D|LS/H|VW/D)
%2	Client host IP address
%3	Number of frames
%4	Number of bytes
%5	Video transmission time
Explanation	This shows the results of video transmission for a video transmission client.

●A021 Data transmission error count for VIEW-Windows video transmission clients (notice)

Message	VW/D@%1 %2 transmission errors
%1	Client host IP address
%2	Transmission error count
Explanation	This shows the number of video transmission errors that have occurred during monitoring station operation.
Response	Compare this with the A016 frame count just shown. If the error count is relatively high, the system is overloaded. Lower the maximum frame rate setting or set a lower traffic control setting on the monitoring station.

●A022 Applet archive load failure (warning)

Message	archive/%1 not found
%1	Applet archive name (glimpse.cab|glimpse.zip|lvapplet.cab|lvapplet.zip|imagemap.gif|snapanim.cab|snapanim.zip|digits.gif)
Explanation	The applet archive file does not exist or is corrupted.
Response	Copy the missing (or damaged) file in the "/archive" applet from the CD-ROM and reboot. The original applet archive file is in the CD-ROM.

●A023 Status change of external input devices (err)

Message	a %1 detected at %2
%1	external device input change (front-edge | rear-edge | pulse | notch)
%2	external device terminal (In1 | In2)
Explanation	A change was detected at external device terminal In1 or In2. "front edge" denotes OFF → ON, "rear-edge" denotes "ON → OFF, "pulse" denotes OFF → ON → OFF, and notch denotes ON → OFF → ON. "pulse" and "notch" are brief (10-20 milliseconds) ON and OFF periods detected during OFF and ON states respectively.

●A024 Picture recording suspended and restarted (notice)

Message	picture recording %1
%1	suspended | recovered
Explanation	Picture recording stopped because of error or picture recording restarted because of error recovery. Error details will be output as A025.

●A025 Picture recording processing error (warning)

Message	picture recording failed: %1
%1	busy|index broken|index full|no video data|no storage device|I/O error
Explanation	This shows the details of an error during picture recording. This message is only displayed when errors of different types occur. (This message is not displayed if the same error occurs repeatedly.)
Response	If the problem is "busy", no response is required. For "index broken" (corrupted index file), repair the index. For "index full" (number of pictures that can be recorded has been exceeded), delete some of the recorded pictures. For "no video data" (video signal input error or maximum picture size exceeded), check the camera and camera settings. For "no storage device" (memory card not inserted), insert a memory card. For "I/O error" (input-output error), check the memory card.

●A026 Picture recording processing failure count (warning)

Message	picture recording failed %1 times
%1	Number of pictures that could not be recorded
Explanation	This shows the number of times picture recording failed in the period between "suspended" and "recovered" in message A024.
Response	In addition to the responses to A025, take steps such as reducing the picture recording frequency specified in the schedule.

●A028 Recorded picture deletion completed successfully (info)

Message	%1 pictures are deleted
%1	Number of recorded pictures deleted
Explanation	Recorded picture delete processing was completed successfully.

●A029 Recorded picture deletion ended abnormally (warning)

Message	picture deletion failed: %1
%1	index broken|no storage device|I/O error
Explanation	Processing was cancelled because an error was detected during recorded picture deletion.
Response	For "index broken" (corrupted index file), repair the index (Rebuilding of recorded picture list). For "no storage device" (memory card not inserted), insert a memory card. For "I/O error" (input-output error), check the memory card.

●A031 Picture index restoration completed successfully (info)

Message	index restoration completed
Explanation	Picture index restoration processing was completed successfully.

●A032 Picture index restoration ended abnormally (warning)

Message	index restoration failed: %1
%1	no space left|no storage device|I/O error
Explanation	Processing was cancelled because an error was detected during picture index restoration.
Response	For "no space left" (memory card full), delete some files or replace the memory card. For "no storage device" (memory card not inserted), insert a memory card. For "I/O error" (input-output error), check the memory card.

Log Messages

●A033 Invalid file detected during picture index restoration (info)

Message	broken file detected: %1
%1	File name
Explanation	A file was detected during picture index restoration that is not a recorded picture.
Response	Delete any invalid files. This does not affect picture index restoration processing.

●A034 Recorded picture file read error during picture index restoration (info)

Message	picture file I/O error: %1
%1	File name
Explanation	An error occurred while a recorded picture file was being read during picture index restoration processing.
Response	Check the contents of the file. This file is not included in the picture index.

HTTP Server Log Messages

●H011 File specification error (notice)

Message	HTTPD: File does not exist: %1
%1	File name
Explanation	The specified file was not found.
Response	Check the URL and file. (If the URL is "/opt/..." the file is on a memory card in "/card/htdocs/...). If the URL is not "/opt/...", the file is on the internal file system in "/htdocs/...".) If there is no error, the file system must be repaired.

Card Slot-related Log Messages

●P001 File system mounting failure (warning)

Message	AUTOMNT: %1 already mounted or %2 busy
%1	Device name
%2	Mount point
Explanation	Two memory cards are inserted together or the memory card cannot be mounted because an error occurred when it was last unmounted.
Response	If the card cannot be mounted because an error occurred when it was last unmounted, reboot.

●P002 Mount number exceeded (err)

Message	AUTOMNT: mount table full
Explanation	The mount entry table is full. This can occur when unmount errors are repeated.
Response	Reboot.

●P003 Memory card error (warning)

Message	AUTOMNT: cannot mount %1 on %2
%1	Device name
%2	Mount point
Explanation	Mount processing was cancelled due to a memory card error.
Response	Replace the memory card.

●P004 Device busy (err)

Message	AUTOMNT: %1: device is busy
%1	Device name
Explanation	The card was unmounted during file access. This does not occur during normal operation.
Response	If this occurred when administration tools were used to unmount the card, reboot.

●P005 Card initialization failed in card slot A (warning)

Message	ENABLER:slota enable err
Explanation	Card information read from the card inserted in card slot A failed.
Response	Re-insert the card or replace the card.

●P006 Card initialization failed in card slot B (warning)

Message	ENABLER:slotb enable err
Explanation	Card information read from the card inserted in PCMCIA slot B failed.
Response	Re-insert the card or replace the card.

●P009 Memory card read error (err)

Message	PCMCIA ATA Card(Slot%1 sector %2): Read Sector Error
%1	Slot (A|B)
%2	Sector number
Explanation	A sector read error occurred. The card may be damaged.
Response	Check the memory card and, if necessary, reformat the card. If there is a physical fault on the card, replace the card.

●P010 Memory card write error (err)

Message	PCMCIA ATA Card(Slot%1 sector %2): Write Sector Error
%1	Slot (A|B)
%2	Sector number
Explanation	A sector write error occurred. The card may be damaged.
Response	Check the memory card and, if necessary, reformat the card. If there is a physical fault on the card, replace the card.

System-related Log Messages

●S001 Ethernet interface initialization failed (crit)

Message	eci: netif can't up
Explanation	Network interface initialization failed.
Response	If rebooting does not resolve the problem, contact an authorized Canon service representative.

●S002 Ethernet route registration failure (err)

Message	eci: net route can't add
Explanation	An attempt to register a route for a local Ethernet segment failed.
Response	Correct the Ethernet settings and reboot.

●S003 Ethernet default route registration failed (err)

Message	eci: default route can't add
Explanation	Registration of the default Ethernet route failed.
Response	Correct the Ethernet settings and reboot.

●S004 System startup (info)

Message	System started
Explanation	The VB software started up.

●S005 System settings changed (info)

Message	System settings updated
Explanation	The VB software settings were modified without a reboot.

●S006 IP address conflict detection at startup (err)

Message	Detected a conflict for IP address %1 with %2
%1	IP address
%2	Ethernet address
Explanation	An IP address conflict was detected during startup. If there is a device running on the network that has the same IP address as the VB101, this error occurs when the VB101 starts up.
Response	Change the VB101 IP address or change the IP address of the conflicting network device. If you change the VB101 IP address, the VB101 must be rebooted. When there is an IP address conflict, it may not be possible to modify the settings via Ethernet. In this event, an initial setup tool must be used to change the settings.

●S007 IP address conflict detected during operation (err)

Message	Duplicate IP address %1
%1	Ethernet address
Explanation	An IP address conflict was detected during operation. This occurs when a network device with the same IP address as the VB101 is started up after the VB101 was started up.
Response	As for S006.

●S010 FAT (File Allocation Table) count error (err)

Message	only 2 FATs are supported (FATs=%1)
%1	Number of FATs
Explanation	The number of FATs is not 2. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S011 Cluster size error (err)

Message	cluster size is zero
Explanation	The size of clusters is zero. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S012 Sector size error (err)

Message	logical sector size is zero
Explanation	The sector size is zero. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S013 FAT entry count error (err)

Message	file system has %1 clusters, but only space for %2 FAT clusters
%1	Number of clusters
%2	Number of FAT entries
Explanation	The FAT entry recording area for the number of clusters is not allocated. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S014 Root directory size error (err)

Message	root directory size is zero
Explanation	The root directory size is zero. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S015 Root directory entry count error (err)

Message	root directory doesn't span an integral number of sector sizes
Explanation	The number of root directory entries is not consistent with the recording area size for root directory entries. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S016 Logical sector size error (err)

Message	logical sector size is not a multiple of the physical sector size
Explanation	The logical sector size is not a multiple of the physical sector size. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S017 Boot sector error (err)

Message	Invalid disk format in boot sector
Explanation	A value recorded in the boot sector is not valid for the FAT format. The file system may be corrupted or it may not be formatted as a FAT file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S018 Write error during file system checking (err)

Message	chkdsk:Disk Write Error
Explanation	A write error occurred during file system checking.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S019 Read error during file system checking (err)

Message	chkdsk: Disk Read Error
Explanation	A read error occurred during the file system check.
Response	If the error is related to the built-in file system, contact your local Canon service agent. If the error is related to the memory card, replace the memory card.

●S020 File system checking ended abnormally (err)

Message	device name (%1) chkdsk unsuccessful
%1	Device name (/dev/hd0a|ata card)
Explanation	This error message appears after error messages S010 to S019. If the device name is "ata card", the error is on the memory card. If the device name is "/dev/hd0a", it affects the internal file system.
Response	If this error affects the internal file system, contact an authorized Canon service representative. If it affects a memory card, replace the memory card.

●S021 File system structural defect (err)

Message	disk has a structural default
Explanation	Due to a file system structural defect, file system check and mount is not possible.
Response	If the error is related to the built-in file system, contact your local Canon service agent. If the error is related to the memory card, replace the memory card.

●S023 The erase count for the on-board flash ROM exceeded the limit (err)

Message	FlashROM erase count(%1)exceeded the limit
%1	Erase count for the on-board flash ROM
Explanation	The erase count limit for the on-board flash ROM has been exceeded.
Response	Contact an authorized Canon service representative. If you continue to write data after this error occurs, there is a risk of data corruption.

Remote firmware upgrade-related log messages

■I001 Remote firmware upgrade write error (err)

Message	cannot reboot as the firmware is broken
Explanation	Reboot cannot take place because there is an error in the firmware that was written onto read-only memory during the firmware remote upgrade. This error is not a transfer error and has not occurred as a result of a break in transfer. This type of error occurs only when firmware is erased from the ROM or when firmware is written onto the ROM.
Response	Contact your local Canon service representative. There is a possibility that the flash ROM chip has been damaged.

■I002 Application program is stopped because of the remote firmware upgrade (info)

Message	application is halted for updating the firmware
Explanation	The application program has been stopped so that the firmware can be installed remotely. All operations that are underway will be discontinued, and new commands for WebView, VIEW-Windows, image recording and external device output control will not be accepted until a reboot has been carried out.

■I003 Remote firmware upgrade completed (info)

Message	firmware is updated
Explanation	The remote firmware upgrade process has been completed.

■I004 Remote firmware upgrade time-out (warnning)

Message	reboot as the firmware update time is out
Explanation	A reboot has been carried out because the remote firmware upgrade process performed a time-out.
Response	Check the VB101 has restarted with the firmware installed before intialing remote upgrade process (check the Version and Revision numbers that are displayed at the top of the Settings title page).

Appendix

Specifications

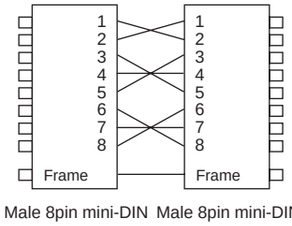
VB101		
Software	Operating System	DRYOS (Canon realtime operating system)
	Protocols	TCP/IP, HTTP, BOOTP, FTP and SMTP
	Video compression method	Motion-JPEG (image quality settings variable from 1 to 99) JPEG (for still images)
	Video compression rate	0.1 to 30 fps (variable)
	Output image sizes	160 x 120, 320 x 240, 640 x 240 (pixel)
	Display image sizes	80 x 60, 160 x 120, 320 x 240, 640 x 480 (pixel)
	Log management	Syslog format (supports email, syslog and flash memory cards)
	Camera control	Pan, tilt, zoom, brightness, shutter speed, focus mode, view restriction, scheduling of camera control authority (Canon VC-C4, VC-C4R, VC-C3, VC-C1 MK- II)
	Connection limitation	Access control (password/host), maximum view time, service period, number of concurrent connections (max. 20)
Interface	Video input	4 (NTSC/PAL, BNC (2), RCA (2))
	Serial	RS-232C (3) (mini-DIN8, camera control (2), initial setup (1))
	Network	Ethernet (1) (RJ45, 10/100 auto-negotiation, PSTN (1 card slot),
	Card slots	2 slots (5V)
	Display LEDs	Power, Network and Card Slot status display
	External I/O	2 inputs, 2 outputs
Main unit specifications	Dimensions	248 x 165 x 52 mm (9 $^{13}/_{16}$ x 6 $^{1}/_{2}$ x 2 $^{3}/_{32}$ in.) (W x D x H) (excluding attachments)
	Weight	1.3kg
	Operating environment	Temp.: 0-40°C; Humidity: 20-85% RM (condensation free)
	Power supply	AC adapter, power consumption 25 W or less

● DRYOS is a realtime OS built into Canon products and intended for the Internet and an intranet mobile devices and digital office equipment.

AC Adapter	
Model	PA-V16
Input	100-240 V AC, 50/60 Hz
Output	13.3 V DC, 1.8 A (max.)
Polarity	Exterior (-), interior (+)
Size	58 x 118 x 25 mm (2 $^{5}/_{16}$ x 4 $^{21}/_{32}$ x 1 in.) (W x D x H) (excluding attachments)
Weight	Approx. 205 g

● These specifications are subject to change without notice due to product improvements, etc.

Wire connection of the camera control cable (RS-232C)



Male 8pin mini-DIN Male 8pin mini-DIN

External Device I/O Terminals

External Device Input Terminals (In1, In2)

The external device input terminals consist of 2 terminals (In1 and In2), one of which is '+' (red) and another is '-' (black). The '-' terminal is grounded on the inside of the main unit. By connecting two cables to the + and – terminals and then electrically short-circuiting across the terminals (ON) or separating the connection (OFF), an interrupt can be generated for the internal controller. See "Picture Recording and External Device I/O Settings Page" in Chapter 3 "Setup Procedures" (→ P.45) for information on the settings.

Connect any sensors and switches to terminals with electrically separate GND terminals and power supplies.

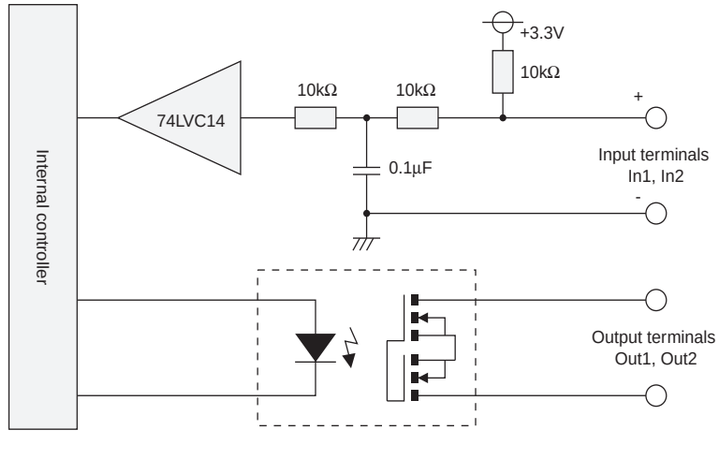
External Device Output Terminals (Out1, Out2)

The external device output terminals consist of 2 white terminals (Out1 and Out2). Both terminal combinations are peers. The Internal controller switches the two output terminals to disconnected or connected condition. The output terminals use optocouplers and are separate from the internal circuit in the VB101. Loads connected to the output terminals should be within the following ratings:

Rating across the output terminals: Up to 50 V DC

Continuous load current: 200 mA

■Internal Connection Chart



Using the Enclosed Software

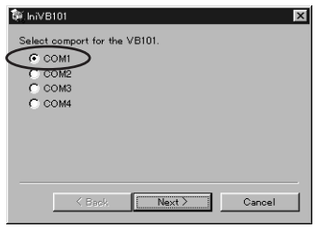
Restoring the Factory Default Settings

Use the "IniVB101.exe" and "inivb101.elf" files in the same directory on the enclosed CD-ROM to restore the VB101 settings to the factory default values.

1 Connect the VB101 to your PC (→ P.31), insert the enclosed CD-ROM into the CD-ROM drive and launch the "IniVB101.exe" program.

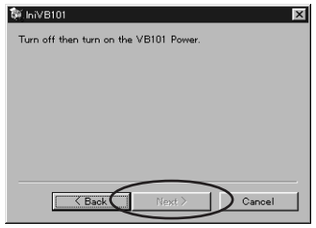
2 When the "IniVB101.exe" dialog box appears, perform steps ① to ④ below to restore the factory default settings.

①Select direct connection to COM1 as the connection method.



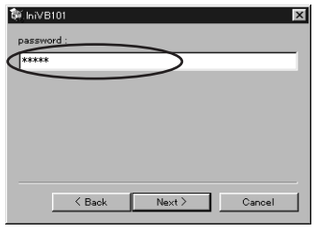
● On some PCs you may have to select a port other than COM1. Check the port number to which the serial cable is connected.

② Switch the VB101 off and then on again.



● When you switch the VB101 on again, the [Next] button is enabled.

③Enter "VB101" as the password (default setting).



④ When the confirmation message appears, click the [OK] button.

●The factory default setting are restored

● Refer to the previous pages for the factory default settings.

Note

- **When you click the [Cancel] button after switching the VB101 back on, the power LED remains lit orange. At this point, the VB101 software has not started up. If you do not need to change the settings, switch the VB101 to off and then on again and check that the power LED is green. To begin the setup procedure again, launch "IniVB101.exe" and then switch the VB101 off and on again as directed by the on-screen instructions.**
- **If you forget the password, you will have to return the VB101 to a service center. Please contact your Canon dealer.**

Upgrading the Firmware Remotely

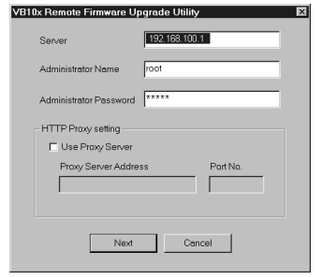
When a new version of the firmware is released, the firmware can be upgraded remotely. To upgrade remotely, use the "vbrfu.exe" program on the CD-ROM and the new software.

1 Obtain the new software.

Visit the following Web site (URL:http:www.x-zone.canon.co.jp/WebView-E/index.htm) for the latest information on new firmware.

2 Launch the "vbrfu.exe" program on the enclosed CD-ROM and used the procedure below to perform the remote upgrade.

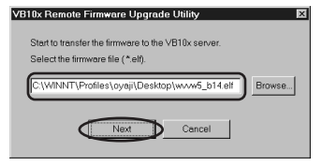
① Enter the IP address, user name and password.



● Server address: Camera server IP address
● Administrator user name: Server administrator user name
● Administrator password: Server administrator password

② The current version is displayed.

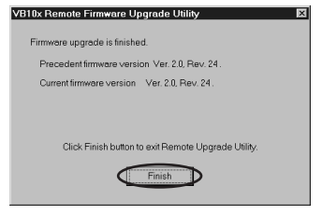
③ Specify the firmware file to be downloaded to the server.



④ Store the downloaded firmware in flash ROM.

VB10x Remote Firmware Upgrade Utility
Storage transferred firmware into Flash ROM.
Click Next button to continue, and to cancel click Cancel button.
Next
Cancel

(5) The completion window appears.


VB10x Remote Firmware Upgrade Utility
Firmware upgrade is finished.
Precedent firmware version Ver. 2.0, Rev. 24 .
Current firmware version Ver. 2.0, Rev. 24 .
Click Finish button to exit Remote Upgrade Utility.
Finish

Note

Do not turn the VB101 off until the completion window appears. Turning the VB101 off before the Completion window appears may prevent the VB101 from starting up properly. If this occurs, consult your Canon dealer or service outlet.

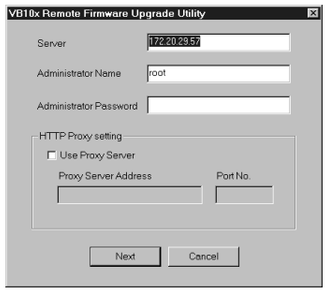
Using the Enclosed Software

Using the Administrator Viewer

In the same way as the client views video, the Administrator Viewer can be used to view video images from the camera and to adjust the camera presets and video.
The Administrator Viewer can also be used to control the camera when ordinary users are forbidden to control the camera.

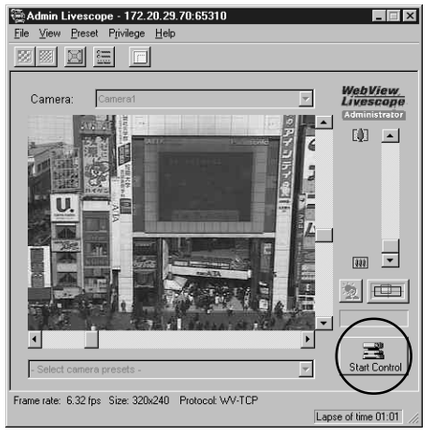
1 **Launch the "vbalv.exe" program on the enclosed CD-ROM.**

2 **Enter the IP address, video and camera control ports, user names and passwords.**



3 **Display the Administrator Viewer screen.**

* Refer to the "Viewer User's Manual" for information on using the viewer.



The Administrator Viewer window can be used to display images and control the camera. Click the [Start Control] button to acquired control privileges.

The Administrator Viewer has a panorama display function. However, the VB101 does not support shooting or transmission of Panorama images. Consequently, if the Panorama display button is clicked, a blank Panorama window appears. By moving and resizing the rectangular frames on the Panorama window, you can pan, tilt and zoom the camera.

Note

Administrator Privileges

The Administrator Viewer has the following special privileges not available to ordinary viewers:

- The Administrator Viewer has unlimited video connection time. After you have finished viewing images, you should quit the Administrator Viewer.
- The administrator can connect to the system outside service hours.
- When the Administrator Viewer acquires camera control privileges, it forcibly retains continued camera control even when a request for camera control authorization is received from an ordinary user. After you have finished viewing images, you must quit the Administrator Viewer. Alternatively, you can click the control privileges button in the Administrator Viewer again to relinquish control privileges.
- When view restriction settings has been set on the camera server, the Administrator Viewer can control the camera beyond the specified field of view. However, note that ordinary viewers can also view the areas outside the specified field of view.

Factory Default Setting

Item	Setting	Item Setting 1 ((y) (m) (d))	Item setting 2 ((y) (m) (d))
●Administrator ID	root		
●Administrator password	VB101		
●Settings page path	admin		
●Device name	None		
●Date and time Offset from GMT	 9		
●Ethernet Address setting method Give Bootp option priority when Subnet Mask is decided. Give Bootp option priority when Gateway Address is decided. IP address Subnet mask	Use Auto Setting Check No check 192.168.100.1 255.255.255.0		
●PPP PPP local address PPP remote address PPP account list Maximum modem speed	No use 192.168.101.1 192.168.101.2 None 57600		
●Gateway Network interface Gateway address	 None Empty		
●Video input Main camera (following settings common to 1, 2, 3 and 4) Video signal Video Capture size Video Quality	 Camera 1 Auto Detect 320 x 240 50		
●Camera control Camera control port 1 Baud rate Wide converter Camera control port 2 Baud rate Wide converter	 Camera 1 9600 Not Used Camera 2 9600 Not Used		
●Home position Pan Tilt Zoom Brightness Shutter speed Focus mode Visibility range restrictions Upper/Lower value Left/Right value Telephoto/Wide	 None None None Standard Auto Auto None None None		

Item	Setting	Item setting 1 ((y) (m) (d))	Item setting 2 ((y) (m) (d))
●Preset	None		
●Image recording	No		
●Access Authorization	None		
●Application settings WebView Livescope Video Transmission Port Camera Control Port Max Clients Control Queue Length Max Frame rate (fps) Max View Time (sec) Max Camera Control Time (sec) Still Video Capture Delay Waiting (ms) Service time restriction VIEW-Windows 1.2.1 Video Transmission Port Camera Control Port Switcher Control Port Max Clients Max Frame rate (fps)	 Selected 65310 65311 20 20 30.0 0 20 1500 None Not selected 5111 5110 5120 10 30.0		
●Miscellaneous Settings HTTP Port Maximum Clients Maximum Idling Time (sec) Name Server Address (1) Name Server Address (2) Name Server Address (3) Mail Server Host Sender's (From) Mail Address Recipient Mail Address Syslog Server Host Max Log File Number Max Log File Size (Kbytes) Log mail collection time Response to Error Response to Warning Response to Information	 80 40 10 None None None None None None None 10 64 10 No checks No checks No checks		

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